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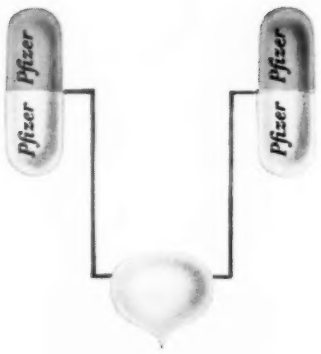

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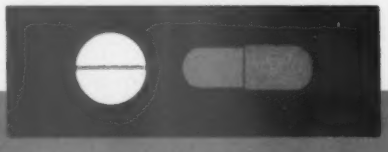

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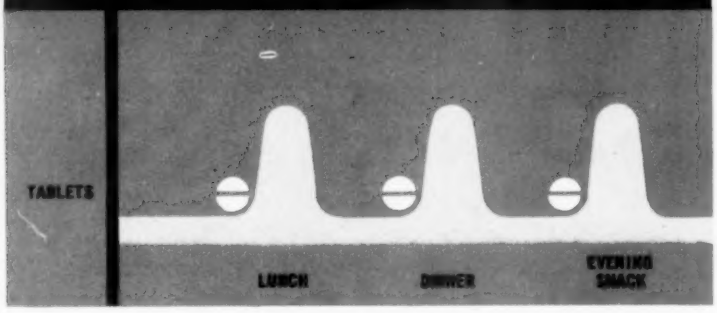

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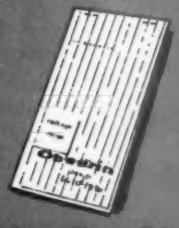

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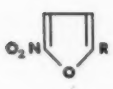

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1. Murphree, H.B., Jr.; Jenney, E.H., and Pfeiffer, C.C.: 2-Dimethylaminoethanol as a Central Nervous System Stimulant. Presented before Assoc. for Research in Nervous and Mental Disease, New York, Dec. 12-14, 1957. To be published.
In Exhaustion and Depression–In a study of over 100 patients suffering from various psychiatric disorders, especially exhaustion and mild depression, the clinical effect of 'Deaner' was to increase energy and to relieve depression in over 70%.
2. Lemere, F., and Lasater, J.H.: Am. J. Psychiat. 114:655 (Jan.) 1958.
In Learning Problems–Some of the children with reading problems and other learning defects have improved markedly during their treatment with 'Deaner'.
3. Oettinger, L.: To be published.

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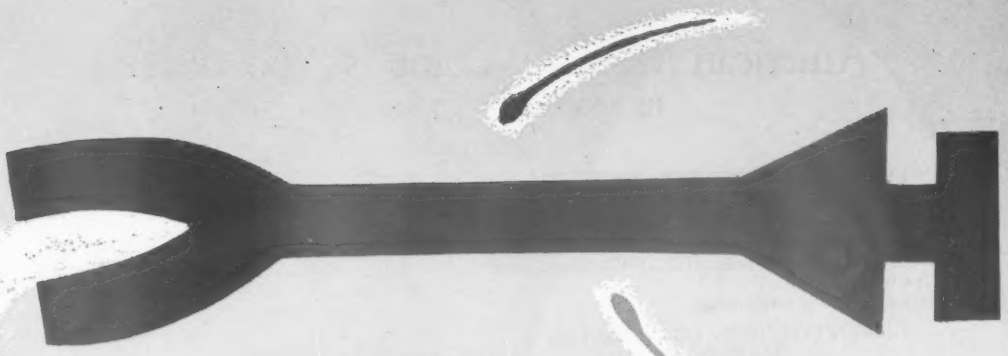

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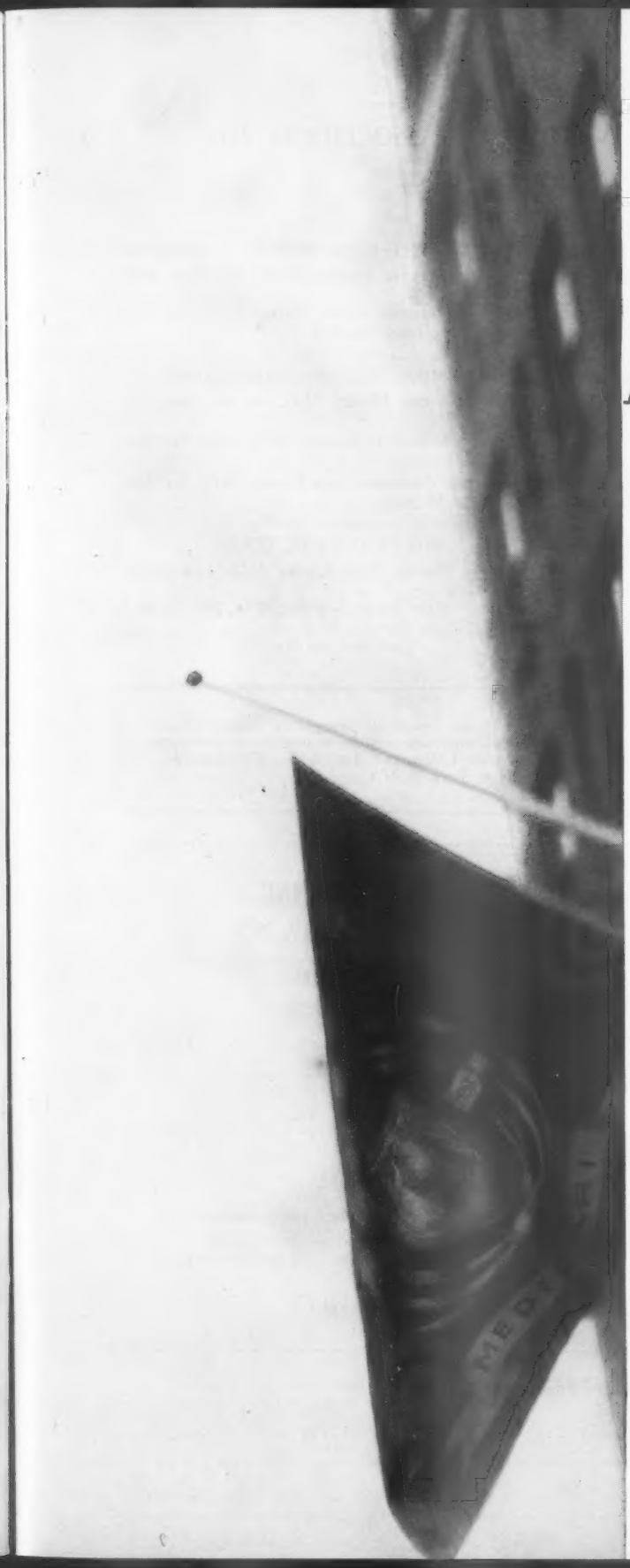

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*Schneeberg, N. G.; Perczek, L.; Nodine, J. H., and Perloff, W. H.: Methallenestril, a New Synthetic Estrogen, J.A.M.A. *161*:1062 (July 14) 1956.

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Journal of the
AMERICAN MEDICAL WOMEN'S ASSOCIATION

Volume 13 JULY, 1958 Number 7

Radical Mastectomy: Review of Two Hundred Fifty-Three Cases of Carcinoma of Breast*

Mary Lee Edward, M.D., F.A.C.S.

SYMPTOMS OF CARCINOMA of the breast are variable, the most usual being the presence of a mass or lump. However, in 253 radical operations done at the New York Infirmary from 1926 through 1953, pain was complained of fairly often and was the second most frequent symptom, contrary to usual opinion. Symptoms, classified according to age groups, are noted in table I. Some patients complained of more than one symptom.

The age groups of the patients in our series were as follows: 20-29 years, 3 cases; 30-39 years, 36 cases; 40-49 years, 71 cases; 50-59 years, 91 cases; 60-69 years, 44 cases; and 70-79 years, 8 cases.

Of the pathological findings in this series, by far the commonest tumor was duct carcinoma (162 of 253 cases). Fibrocarcinoma was next most common (25), followed by comedocarcinoma (21), adenocarcinoma (8), carcinoma simplex (7), and carcinoma of the sweat glands (5). Other diagnoses were mucoid carcinoma, gelatinous carcinoma, medullary cancer, scirrhous carcinoma, and cystosarcoma phylloides.

In regard to involvement of axillary nodes, nodes were clear in 138 and involved in 115 patients. The breakdown according to age group is as follows: In the 20 to 30 year age group 1 patient had multiple nodes with metastases, 1 had one node, and 1 had none; in the 30 to 40 year age group 22 had no involvement while 14 showed positive nodes; in the 40 to 50 year age group the nodes were clear in 44 patients while 27 had metastases; in the 50 to 60 year age group 45 patients had no nodes involved while 46 showed metastases; in the 60 to 70 year classification 23 had metastases to nodes and 21 had no metastases; and in the 70 to 79 year age group nodes were clear in 5 and metastases present in 3.

SURVIVAL DATA

Our survival statistics include only the patients operated upon before 1949, to allow at least a five year survival time for the group seen in 1953. Eight different surgeons operated upon 174 patients before 1949, and these

* Operations performed during the directorship of Dr. Anna Hubert, who died in October, 1956. Histories of the patients compiled by Dr. Hubert, members of the surgical staff, and Miss Esther Boughton.

Dr. Edward is Attending Surgeon Emeritus at New York Infirmary.

TABLE I

Symptoms Classified According to Age Groups

Symptoms	Age Group, Yr.					
	20-29	30-39	40-49	50-59	60-69	70-79
Lump	2	32	57	79	35	8
Pain; pulling sensation; sensitive feeling; tingling pain during menstruation	–	1	5	7	3	–
Discharge or blood from nipple; tenderness of or sore nipple	–	1	2	3	2	2
Retracted nipple	–	1	–	5	2	–
Depression or involvement of skin	–	–	1	3	1	–
Pain down arm	–	–	2	1	1	–
Painful lump	–	–	3	–	1	–
Lump on arm or in axilla	1	–	–	2	1	–
Enlargement of breast or heavy feeling	–	1	1	2	–	–
Ulcer of areola	–	–	–	–	1	–

patients were ward, semiprivate, and private patients. Operations were performed on all, except those with distant metastases. Some had fungating masses or bulky metastases. This, necessarily, lowered the rate of survival.

Our follow-up studies refer only to the length of time the patient was known to survive. In many cases the last note was that there was no evidence of disease. Unfortunately, we lost sight of many patients; these, although not necessarily dead, were counted as nonsurvivors. We did not exclude cases where data were incomplete. The percentage of survivors is the percentage of the whole group (table II).

Three of the 174 patients each had two radical mastectomies in different years. In each case the first diagnosis was used for the pathology report, and the patient was registered as 1 case, rather than as 2 cases, for follow-up studies.

Of the 174 patients, 81 (46.55 per cent) lived more than five years. Thirty-one (17.82 per cent) lived more than 10 years. For comparison of our survival rates in patients with carcinoma of the breast and those of other hospitals, see table III.

Five and 10 year survival rates for patients with the different types of tumors seen in our study are classified in table II by number and percentage of the total operated upon, of the 5 year survivor group, and of the 10 year survivor group. The percentage of patients with duct carcinoma decreased in the 10 year group and the percentage of those with comedocarcinoma increased, as did the percentage

TABLE II

Percentage of Five and Ten Year Survivors

Type of Tumor	Whole Group		5 Yr. Survivors		10 Yr. Survivors	
	No.	% of 174	No.	% of 81 Survivors	No.	% of 31 Survivors
Comedocarcinoma	15	8.62	7	8.64	4	12.91
Duct carcinoma	95	54.60	44	54.32	13	41.94
Fibrocarcinoma	26	14.94	12	14.82	4	12.91
Carcinoma simplex	7	4.03	4	4.95	2	6.45
Medullary cancer	5	2.88	2	2.48	1	3.22
Mucoid carcinoma	1	0.57	1	1.23	1	3.22
Sweat gland carcinoma	5	2.88	1	1.23	1	3.22
Scirrhous carcinoma	1	0.57	1	1.23	0	–
Alveolar carcinoma and adenocarcinoma	1	0.57	0	–	0	–
Cystosarcoma phylloides	1	0.57	1	1.23	0	–
Adenocarcinoma	6	3.45	1	1.23	1	3.22
Unclassified	11	6.32	7	8.64	4	12.91
Total	174		81		31	

TABLE III

Survival Rate in Various Clinics

Author	Hospital	No. of Cases	5 Yr. Survival Rate, %	10 Yr. Survival Rate, %	Selection of Cases
Halsted, W. S.: Tr. Am. S.A. *25*:61, 1907	Johns Hopkins	232	38.3 (3 yr. cure)	—	Neck dissection in some as high as bifurcation of carotid
Finney, G. G., and others: Ann. Surg. *125*:673, 1947	Union Memorial	298	49	19	No clinic cases, no cases refused, 4 surgeons
Eggers C., and others: Ann Surg. *113*:321, 1941	New York Skin and Cancer	278 (253 operable)	33.5 cure	21.7 cure	All cases without demonstrable distant metastases including cases with supraclavicular involvement
Adair, F. E.: S. Clin. North America *33*:313, 1953	Memorial	3,495	54.4	33.8	Disease localized in breast or breast and axilla
McGraw, A. B.: Arch. Surg. *55*:292, 1947	Henry Ford	412	43	—	All but 6 cases, small group of surgeons
Taylor, G. W.: Am. J. Roentgenol. *62*:341, 1949	Massachusetts General	—	52	—	Carefully selected cases
Harrington, S. W.: J.A.M.A. *148*:1007, 1952	Mayo	7,325	51.2	34.6	Any lesion freely movable from thoracic wall
Lewison, E. F., and others: J.A.M.A. *153*:905, 1953	Johns Hopkins	255 (204 operable)	44.1	—	Operability depending on the physician's judgment
Haagensen, C. D., and Stout, A. P.: Ann. Surg. *134*:151, 1951	Presbyterian	495	48.7	—	Carefully selected cases, with own criteria of operability
Edward, M. L.: J.Am.M. Women's A. *13*:259, 1958	New York Infirmary	174 operated upon before 1949	46.55	17.82	All cases without distant metastases, 8

in the unclassified carcinoma group. The histological type, according to these figures, does affect the prognosis. For the percentages of survival according to type of tumor, see table IV.

Involvement of nodes has always been considered of paramount importance. Of 174 patients operated upon before 1949, 99 had positive nodes and 75 negative nodes. In our series of 81 who survived five years and over, 42 showed positive nodes and 39 had clear nodes. Of the 31 who lived more than 10 years, 14 had positive nodes and 17 clear nodes at the time of operation. One gets the impression from reviewing the records of those who lived 10 years or longer, and of those who lived 5 to 10 years, that involvement of the nodes is not the most important

TABLE IV

Survival Rates in 174 Patients According to Type of Tumor

Type	No. of Pt.	5 Year Survivors		10 Year Survivors	
		No.	%	No.	%
Comedocarcinoma	15	7	46.67	4	26.67
Duct carcinoma	95	44	46.32	13	13.68
Fibrocarcinoma	26	12	46.15	4	15.38
Carcinoma simplex	7	4	57.14	2	28.57
Medullary cancer	5	2	40.00	1	20.00
Muciod carcinoma	1	1	100.00	1	100.00
Sweat gland carcinoma	5	1	20.00	1	20.00
Scirrhous carcinoma	1	1	100.00	0	.00
Alveolar carcinoma and adenocarcinoma	1	0	.00	0	.00
Cystosarcoma phylloides	1	1	100.00	0	.00
Adenocarcinoma	6	1	16.67	1	16.67
Unclassified	11	7	63.64	4	36.36
Total	174	81	46.55	31	17.82

TABLE V

Ten Year Survivors in the Forty to Fifty Year Age Group

Case No.	Type of Tumor	Status of Nodes	Date of Operation	Survival Data
1	Carcinoma simplex	Metastases to nodes	1/16/26	Alive and well in 7/52
2	Medullary cancer	No nodes involved	11/ 3/32	Lived 11 yr. 11 mo. (died in 1944)
3	Duct carcinoma	Extensive involvement of nodes	5/28/32	Lived 10 yr. 3 mo. (died 10/ 19/42)
4	Duct carcinoma	No metastases	7/12/34	Alive and well in 1947
5	Adenocarcinoma	No metastases	10/24/36	No evidence of disease on 4/ 29/53
6	Comedocarcinoma	Metastases to nodes	3/19/37	No evidence of disease on 11/ 9/51
7	"Carcinoma diffuse"	No metastases	6/25/37	Alive and well in 1952
8	Duct carcinoma	No metastases	1/ 4/38	Alive and well in 1953
9	Duct carcinoma	No nodes involved	1/ 5/39	Alive and well in 1952
10	Duct carcinoma	Metastases to nodes	8/17/38	Alive and well on 2/29/52
11	"Small amount residual disease"	Metastases	6/23/39	Alive and well on 6/19/52
12	Duct carcinoma	No metastases	1/20/40	No evidence of disease in 5/51
13	Duct carcinoma	No metastases	5/24/51	No evidence of disease in 3/53
14	Duct carcinoma	Bulky metastases	11/ 3/41	No evidence of diseases on 9/ 29/53

feature in survival. Of further interest along these lines are the records of those who lived 10 years or more, for example, in the 40 to 50 year age group (table V).

DESCRIPTION OF OPERATION

The procedure practiced at the New York Infirmary from 1926 through 1953 was, with a few modifications, the operation described by Willy Myer in the *Journal of the American Medical Association* of July 20, 1905. The principal modification was the incision, which was made vertically from a point slightly below and to the inner side of the coracoid process downward as far as the breast, elliptically around the breast, and vertically downward to a point below the costal margin. The second modification was that the clavicular portion of the pectoralis major and the costocoracoid membrane were not always removed.

This incision gives access to the top of the axilla and allows every shred of fat to be removed from the axilla. In leaving the costocoracoid membrane and the clavicular portion of the pectoralis major intact, the thoracoacromial artery is less liable to injury and resulting hemorrhage.

The operation in most cases required upwards of four hours and was a meticulous dissection done with great care. The vertical incision has proved successful through the years. It can be made in almost all cases and only occasionally is any other incision necessary. The resulting scar is roughly midclavicular and more or less straight. From the point of view of the patient, this is important with regard to comfort. The procedure is not mutilating, allows perfect freedom of motion of the arm, and no contracture of the scar occurs.

Any success we have had has been due, I believe, to the incision, to the dissecting of the axilla first, to the and clearing out of every shred of fat from the axilla. Of these points, the last is the most important. The Willy Myer technique allows the most difficult part of the operation to be done while the surgeon is fresh, which is a great advantage.

It should be added that all patients received postoperative roentgen-ray therapy.

SUMMARY AND CONCLUSIONS

1. In 253 cases of carcinoma of the breast, pain was the second most frequent symptom; this is contrary to the usual opinion.

2. In the cases reviewed by the author, the type of tumor affected the prognosis, whereas involvement of nodes did not appear to be the most important feature in survival.

3. The Willy Myer operation, somewhat modified, was used. The most important procedure in this operation is the clearing out of every shred of fat from the axilla.

4. Survival statistics on 174 patients operated upon before 1949 show that 81, or 46.55 per cent, lived more than 5 years and that 31, or 17.82 per cent, lived more than 10 years.

CASE REPORT

Case Histories of Two Patients with Toxic Symptoms of Drug Reaction

A. Parks McCombs, M.D.

Presented by the Department of Medicine of the New York Infirmary

EVEN IN THE DAYS before the "wonder drugs" we were taught to be alert for untoward reactions of the few individuals sensitive to drugs that were a specific blessing for the majority of patients. Today, with the seemingly unlimited number of new drugs available to all of us, we must be even more alert to the danger signal flashing on almost every prescription we write. We cannot afford to be lulled into a state of satisfaction with the good results, for overnight this can be changed into a nightmare. Nor can we afford not to use the drugs where indicated because a few individuals present us with tragedies.

Two patients, each suffering from reaction to a drug prescribed by a physician, were on the medical service of the New York Infirmary at the same time. The drugs were phenylbutazone (Butazolidin) and chlorpromazine (Thorazine). Both patients were very ill and both were victims of drugs that have helped so many. They were alike in that neither of them had preadmission laboratory work done to establish normal values. These would have helped us to evaluate the presenting reactions. The patients differed in that one had taken the medication without any supervision after the initial visit to the physician, while the other had been in a sanatorium and was continued on phenylbutazone therapy after the symptoms developed.

In all fairness we have asked ourselves what would have happened had the former woman remained under supervision and had frequent examinations of the blood and urine. Would her condition have been detected earlier than at the sudden onset of the symptoms six days before admission, or would she have been permitted to continue on therapy with the drug for this length of time? We do not know how long the severe destruction of the white blood cells had been progressing so we cannot answer the questions. In the second case it seems unwise to have continued chlorpromazine therapy in a patient who presented toxic symptoms characteristic of those produced by this drug, even though the dosage was reduced. Since her reactions came on early in the course of therapy, we believe that use of the drug should have been discontinued.

These 2 cases and the accumulated data are presented with the hope that they will contribute to the knowledge of these drugs.

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REPORT OF CASES

CASE 1. An 80 year old Finnish woman was admitted to the hospital on March 29, 1955, because of fever, restlessness, polyuria, hematuria, and areas of discoloration of the skin and mucous membranes. As she spoke little English, the history was obtained through her daughter. The past history of the patient and family history were noncontributory.

History. The patient had been well except for one

attack of "rheumatism" of the hands and wrists in 1920, which had cleared completely. Nine months before the present admission, her physician had given her phenylbutazone for severe pains in her shoulders, wrists, and hands. As this was effective in the control of the pain, she continued to take the medication, off and on, until the time of admission. Neither a blood count nor a urine examination was done at any time during the course of the therapy, nor did she return to the physician after the initial visit. There was no change in her apparent good health until six days before admission when she developed a sore throat; she treated this effectively with local measures for three days. She then developed the symptoms of which she complained on admission and called a neighborhood physician who discontinued all medication and placed her on antibiotic therapy for three days. Because she did not improve he had her admitted to the New York Infirmary.

Physical Examination. This elderly woman did not appear acutely ill. She could lie flat or move about at will. As she talked and laughed with her family there was no sign of discomfort or respiratory embarrassment.

In addition to the very marked pallor of both the skin and mucous membranes, all over the body were scattered multiple areas of ecchymosis and hemorrhagic blebs varying from the size of a pin point to the size of the hand. In areas of pressure and trauma they were especially marked. Some of the buccal and vaginal membrane lesions were crusted with blood or oozed a bloody serum. The uvula looked ready to slough off. The tongue had a dirty brown coating.

The heart was enlarged to the right and the left, the rate was rapid (120 per minute) and totally irregular, and there was a variable pulse deficit. A loud systolic murmur was heard over the entire precordium. The blood pressure was 112/70 mm. Hg. Basal rales were heard bilaterally.

The abdomen was distended, and the liver was felt 7 cm. below the costal margin. The spleen was not palpable.

Laboratory and Roentgenographic Findings. For the pertinent laboratory and roentgenographic findings see table I.

On admission a roentgenogram of the chest showed that the heart was enlarged to the right and left. The parenchyma was clear except for haziness at both bases suggestive of fluid or infiltration. The electrocardiogram showed auricular fibrillation. The blood count was as follows: hemoglobin, 8.6 Gm. per 100 cc.; erythrocytes, 2.01 million per cubic millimeter; and leukocytes, 950 per cubic millimeter, with 8 lymphocytes and 1 monocyte. The platelet count was 245,000 per cubic millimeter.

Course. First Week: The admission temperature, 104.8 F, fell to 102 F and then fluctuated between 100 and 101 F for the next two weeks.

Medication included adequate digitalization and 500 cc. of whole blood, which was given after the first of three infusions of 5 per cent glucose in distilled water to which 40 units of ACTH had been added. The patient was placed in an oxygen tent on the second day and this was used, off and on, throughout the remainder of the course. The throat cultures revealed *Candida albicans* and on the third hospital day nystatin (Mycostatin) therapy was started, later being replaced by chlorquinaldol (Sterosan). On the fourth day the patient developed a severe thrombophlebitis of the left leg, which complicated her care, as the pressure of the wet dressings was sufficient to cause extensive hemorrhages into the skin. No anticoagulants were used. After the initial transfusion, the red blood cells and hemoglobin level increased slightly and the total white count rose from 950 to 1,650 cells on the sixth day. The differential count rose from 8 lymphocytes on the entire slide to 23 on the eighth day. No cells of the myelocytic series were seen. The bone marrow smear taken on the second day showed an aplastic bone marrow with such a paucity of cells that only the remnants of one megakaryocyte and a few lymphocytes could be identified.

During this first week the patient remained alert for the greater part of the time despite intervals of drowsiness and confusion. Because of the language difficulty we were dependent on the family to help in her care. She could be aroused and would talk without seeming to show any cardiac or respiratory embarrassment.

The throat showed marked improvement by the end of the first week, although the lips were still crusted with bloody scabs. She occasionally had frankly bloody urine.

Second and Third Weeks: The lesions of the mucous membranes of the mouth and the uvula cleared (Fig. 1, *Top*), then disappeared and did not recur. The hemorrhages of the skin varied. As the initial ones cleared new ones appeared, especially in any area where there had been even the slightest pressure (Fig. 1, *Bottom*). The patient was able to take fluids and food by mouth in spite of the state of the mem-

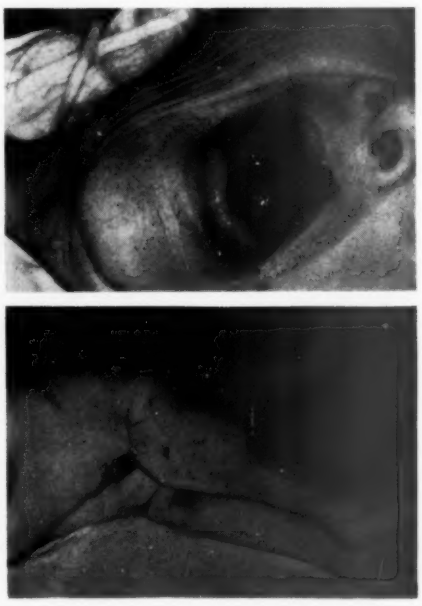

Fig. 1 (*Top*). Mouth lesions and sloughing of the uvula during third week. (*Bottom*). Extensive hematomas of legs, both old and new, from pressure (during third week).

TABLE I
Laboratory Findings in Case 1

Day	Hg., Gm./ 100 Cc.	RBC/ Cu. Mm. (In Millions)	WBC/ Cu. Mm.	Differentials, %				Platelets/ Cu. Mm.
				Polymorphonuclear Leukocytes	Lymphocytes	Monocytes	Eosinophils	
1*	8.6	2.01	950	0	8	1	0	245,000
2	8.9	2.62	1,000	0	23	1	0	210,000
3	10.5	3.72	1,000	1	14	-	-	—
4	10.4	3.71	1,500	1	23	-	-	—
6	8.8	3.07	1,650	13	11	1	-	—
7	8.7	2.51	1,650	4	20	1	-	—
8	8.0	2.51	1,250	1	23	1	-	—
9	7.5	2.44	1,800	6	43	1	-	—
10	5.9	2.70	2,300	13	87	-	-	—
13†	7.8	2.29	1,500	4	20	-	-	—
14	6.9	2.47	1,750	38	60	1	1	—
15	—	2.36	1,650	40	65	-	-	—
20	6.0	2.40	3,000	50	50	-	-	—
23	5.7	1.73	3,100	68	32	-	-	—
24	8.1	2.24	2,750	53	47	-	-	—

*On the first day additional blood findings were: bleeding time, 25 minutes; coagulation time (Lee-White), 3 minutes and 20 seconds (first tube=3 minutes and 15 seconds, second tube=4 minutes, third tube=5 minutes and 45 seconds); prothrombin time (Quick) 17 seconds (control, 15 seconds); red blood cell fragility test, 0.40% sodium chloride initially (control, 0.38%) and 0.30% sodium chloride at completion (control, 0.30%); albumin, 2.5 Gm./100 cc.; globulin, 3.2 Gm./100 cc.; urea nitrogen, 29.1 mg./100 cc.; and phosphorus, 5.7 mg./100 cc. Urine findings were as follows: color, yellow and cloudy; specific gravity, 1.014; *p*H, 4.5; albumin, 4+; sugar, none; casts, 100+; erythrocytes, rare; and leukocytes, few. Blood cultures were negative, but throat cultures showed *Candida albicans*.

†On the thirteenth day additional blood findings were: sodium, 156 mEq./L., and potassium, 4.4 mEq./L.

branes. It was interesting to observe her cheerful disposition, alert mental state, co-operation, and willingness to help herself in every way possible.

We attempted to give small transfusions on the eighth and ninth days, but these had to be discontinued because of the fragility of her veins and marked hemorrhages in the skin. The blood counts at this time indicated that she was holding her own and making slow progress with the total white blood cell counts. Cortisone therapy was discontinued in favor of ACTH, 40 units daily. On April 20 the dose was reduced to 20 units.

Fourth Week: At the end of the third and the start of the fourth week the patient became lethargic. Temperature ranged between 101 and 102 F. She found it difficult to eat and take fluids. Transfusions and fluids intravenously were again attempted, but these were extremely difficult procedures as the veins could not stand the pressure. The heart rate became very rapid, and there was electrocardiographic evidence of ventricular tachycardia. Treatment with quinidine was unsuccessful in converting the rhythm. She deteriorated rapidly and died on the twenty-sixth hospital day.

Autopsy Findings. Autopsy was performed 21 hours post mortem. Significant gross findings were: (1) diffuse hemorrhages ranging from petechiae to hematomas in the skin, mucous membranes, and subcutaneous tissues; (2) ecchymoses and hemorrhages in the right parotid gland, epicardium, stomach, kidneys, bladder, and endometrium; (3) tarry intestinal contents; (4) moderate coronary sclerosis and myocardial fibrosis; (5) pulmonary edema and terminal lobular pneumonia; (6) dark red spleen of normal size and mushy consistency; and (7) pale bone marrow. Microscopically there was extramedullary hematopoiesis in the spleen. The bone marrow showed extensive fatty replacement and marked depression of both red and white blood cell series. Immature cells were present. Final anatomic diagnosis included: aplastic anemia due to phenylbutazone therapy, multiple hemorrhages in skin and viscera, and terminal pneumonia.

Discussion and Summary. The ward diagnosis on this patient was aplastic anemia and agranulocytosis secondary to a reaction to phenylbutazone, which she had taken intermittently but in large amounts over a nine month period. We were never able to establish the exact amount of the drug taken, nor whether she had taken any other drug or been exposed to any chemical. We were unable to compare the hospital blood findings with any premedication levels. Since there was an abrupt onset of symptoms, the consensus of the staff and the consultants who saw her was that the severe marrow depression had not been present for a long period. The course of

the acute illness was characteristic in that her general state of well-being did not reflect the seriousness of her condition and that there was even a slight improvement, which was maintained for several weeks before the rapid terminal deterioration.

CASE 2. A 32 year old white woman was admitted on March 9, 1955, after one month of experiencing jaundice, loss of appetite, nausea, and vomiting. The past history of the patient and family history were noncontributory.

History. Six months before the onset of symptoms the patient's husband had deserted her, leaving her with the entire responsibility and care of four children ranging in age from 4 to 12 years. Because of this and other emotional and financial problems she had become increasingly depressed, had eaten little, and had increased her beer drinking markedly. She denied other alcohol or drug intake. She had not felt well physically, although she had no specific complaint. At the end of January, 1955, she was admitted to a private mental hospital, and on Feb. 4 she was started on therapy with 200 mg. of chlorpromazine per day. The story that we obtained from her was that during the first week of therapy with this medication she had developed nausea, vomiting, anorexia, and increasing malaise. The urine became dark and the stools lighter in color. As a fever developed she was given "sulfa pills" and insulin injections to stimulate her appetite. On Feb. 10 she noted that her skin looked yellow and that the dosage of chlorpromazine was reduced. There was a marked increase in the severity of the symptoms and her temperature rose to 104 F. She lost 15 lb. during this time. She refused further drug therapy and signed herself out of the hospital on Feb. 23. In spite of written and telephoned requests, we were unable to get a report from this institution until April. When the report came it substantiated her story, giving the date of Feb. 12 as the onset of the higher range of temperature, and Feb. 15 as the day therapy with chlorpromazine was discontinued. No laboratory work had been done either before the administration of the drugs or after the onset of the symptoms. After she returned home her symptoms became more severe and she developed marked itching, diarrhea, and abdominal cramps.

Physicial Examination. The admission examination revealed a slender, dehydrated, deeply jaundiced, and acutely ill young woman. The temperature was 99 F; pulse, 80 per minute; respiration, 20 per minute; and blood pressure, 118/80 mm. Hg. The dry and darkly pigmented skin showed many scratch marks. Mucous membranes and sclera were stained deep yellow, and the tongue was dry and brown. The chest revealed no abnormal findings. The abdomen was soft and not distended. Neither the spleen nor the liver was palpable.

Laboratory and Roentgenographic Findings. The dark urine was positive for bile. For results of other tests see table II.

Roentgenography of the abdomen showed the liver edge just below the rib margin. The gall bladder did not visualize on the cholecystogram taken on March 18 and no visible stones were shown.

Course. The temperature and pulse rate remained unremarkable. For the first three weeks the persistent anorexia, nausea, and occasional vomiting interfered with the intake of food, and we were forced to use fluids and vitamins intravenously to supplement the small intake that the patient could tolerate. The jaundice remained intense and the skin showed a greenish tinge. At times the pruritus was severe and not uncontrolled by diphenhydramine (Benadryl). In spite of her discouragement over the prolonged duration of the symptoms, the patient made every effort to co-operate and to accept her long stay in bed. On March 14 the tip of the spleen and the liver edge became palpable for the first time. They never were very large or tender after the first 24 hours.

As her condition was not materially improved, and as the jaundice had not lessened, a liver biopsy was done. This was reported as characteristic of the pathology described for hepatic damage from chlorpromazine. She was started on 25 mg. of cortisone four times daily on April 3. This was continued until April 25 when the dose was decreased to three times a day. On April 30 the dose was reduced to a twice daily schedule, and on May 10 cortisone therapy was discontinued. By the end of the first week of therapy with cortisone the first real improvement in her general condition was evident. Her appetite returned, the jaundice began to fade, the pruritus diminished, and her morale soared. The laboratory tests reflected the clinical improvement. Serum bilirubin level dropped from the high point of 11.4 mg. per 100 cc. on March 29 to 9.8 on April 8, and to 3.3 on May 2. The amount of alkaline phosphatase, cholesterol, and cholesterol esters remained elevated. The highest cholesterol readings, recorded on May 4, were 664 and 360 mg. per 100 cc. The patient was discharged on May 20 with normal color, a sense of well-being, and without evidence of depression. The spleen and liver edge were still palpable but not tender.

Subsequent Course. This patient was followed in the medical clinic until August, 1956. Cholecystography in August, 1955, failed to reveal stones or disturbance of function. The return to the home was not an easy one as all the emotional and financial problems still were present. She received financial aid from city agencies. Some of the children were placed in school and she had regular visits with the medical department, the psychiatric social worker, and the psychiatry department. She was given dextro amphetamine sulfate (Dexedrine) and a supplementary diet allowance. In August she was seeking employment and hoping to be able to support herself and the children.

Discussion and Summary. On admission we were hampered by inadequate data because we had only the patient's story of medications received, alcoholic habits, and intake of drugs. Any drug might have been taken by a depressed patient who was sufficiently disturbed to be admitted to an institution for psychiatric care. However, accepting her story as true, we felt there was a very close relationship to the intake of a known toxic drug and the development of symptoms characteristic of the course that patients sensitive to

TABLE II

Laboratory Findings in Case 2

Date, 1955-1956	P., Mg./ 100 Cc.	Alkaline Phosphatase, Bod. U.	Bilirubin, Mg./ 100 Cc.	Thymol Turbidity, U.	Ceph.-Chol. Flocculation, 24 and 48 Hr.	Total Chol., Mg./ 100 Cc.	Chol. Esters, Mg./ 100 Cc.	Protein, Gm./ 100 Cc.	Alb./ Glob., Gm./ 100 Cc.	Blood Count Hg., Gm./ 100 Cc.	Blood Count RBC/Cu. Mm. (In Millions)	Blood Count WBC/ Cu. Mm.	Cholecystography
Norms	(2.5-4)	(1.5-5)	(0.5-1.5)	(1.5)		(180-240)	(120-160)	(6.5-7.8)	(4.5/2)				
March* 10	3.9	5.4	7.1	2.7	1+ and 2+	370	218	6.6	3.7/2.9	—	—	—	—
14	—	—	8.7	—	— —	—	—	—	—	12.0	4	6,800	—
16	5.4	2.8	—	2.8	— —	—	—	—	—	—	—	—	—
18	—	—	8.2	—	— —	—	—	—	—	—	—	—	Did
23	—	—	6.5	—	— —	—	—	—	—	—	—	—	not fill
25	—	—	7.1	—	— —	—	—	—	—	—	—	—	—
29	—	—	11.4	—	1+ and 2+	—	—	6.3	3.4/2.9	—	—	—	—
April 9	—	—	9.8	—	— —	—	—	—	—	—	—	—	—
18	—	—	7.1	—	— —	—	—	—	—	—	—	—	—
25	—	—	6.0	—	— —	—	—	—	—	—	—	—	—
May† 2	—	—	3.3	—	— —	—	—	—	—	—	—	—	—
4	—	—	—	—	— —	664	360	7.1	3.5/3.6	—	—	—	—
9	4.3	7.4	3.0	—	— —	620	355	—	—	—	—	—	Poor
18	3.8	7.1	2.2	—	— —	637	425	—	—	10.7	3.99	6,650	function
June 16	—	—	1.4	—	— —	404	—	—	—	—	—	—	—
July 19	—	11.5	—	—	— —	440	300	—	—	—	—	—	Normal
23	—	14.4	0.6	—	— —	—	—	—	—	—	—	—	function
Sept. 9	—	9.8	1.3	—	— —	409	280	—	—	13.1	—	4,890	—
Nov. 1	4.0	13.8	0.8	—	— —	301	229	—	—	—	—	—	—
March 3	3.7	5.1	0.7	—	— —	220	116	—	—	—	—	—	—

*In March additional findings were: on the tenth—blood sugar, 106 mg./100 cc., and prothrombin time (Quick), 14 seconds (control, 13 seconds); on the fourteenth—urine positive for bile; and on the twenty-third—transaminase (aminopherase), 100 units a minute.

†On May 23 bromsulphalein excretion was 57% after 5 minutes and 18% after 45 minutes.

this drug follow, although there were unusual features. The majority of patients clear promptly once the use of the drug is discontinued, and the course of the jaundice and illness is apt to be mild. However, this woman had continued the medication for at least a week after the symptoms became marked and, in addition, also had received one of the sulfonamides. We knew that she had been drinking a large amount of beer for six months and we suspected that she was drinking whiskey although she denied it.

Our working diagnosis was an obstructive type of jaundice from chlorpromazine. We felt that the severity of her course and variations in her chemistries came either from prolonged exposure to the drug after the first symptoms developed or possibly from damage superimposed on pre-existing hepatic disease. The liver biopsy failed to reveal any underlying pathology other than the intralobular biliary stasis described as characteristic in chlorpromazine poisoning. When both her persistent severe illness and the abnormal chemistries were at a peak in the eighth or ninth week, she was started on cortisone therapy. Within one week the change in the clinical picture was marked, and she progressed rapidly toward normal. The improvements were reflected in the return of the laboratory findings to normal. It is not unusual for the cholesterol and alkaline phosphatase to remain high for some time after the patient is considered clinically normal. This patient was discharged on the seventy-second day, approximately 15 weeks after her first dose of chlorpormazine.

CASE REPORT

Actinomycosis of Cervix

Frances L. H. Bogatko, M.D., F.A.C.S.

ALTHOUGH ACTINOMYCOSIS HAS always been considered a rather rare occurrence in the abdomen and pelvis, the recorded statistics of the past five years show either a definitely increasing incidence or a more effective recognition of the disease. Although many strains of this fungous infection are highly sensitive to antimicrobial agents, this disease presents difficult therapeutic problems and still causes a rather high mortality and morbidity. A recent report from Johns Hopkins Hospital contained a survey of 37 patients collected during a period of 25 years. The impression that the disease occurs more frequently in the head and neck is erroneous. A survey of published reports by surgeons, internists, and pathologists gives ample evidence that about 63 per cent of the cases involve the abdomen, whereas only 24 to 37 per cent involve the head and neck. The gross pathology, except in very early cases, is the same; namely, extensive spread of induration and avascularity in the region of active growth, with numerous ulcers, adhesions, and sinus tracts.

In a review of 27 recorded studies of statistics only one article mentioned occurrence of this disease in the cervix. It is quite rare in the corpus uteri and usually results from spread from the ovaries or pelvic colon. I believe it would be of interest, therefore, to report a case of actinomycosis of the cervix.

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REPORT OF A CASE

On Jan. 7, 1955, a 48 year old married woman came to the Strang Cancer Detection Clinic for routine examination. Her only symptoms were occasional vague "gas pains and heartburn" following ingestion of fatty foods. Chest roentgenography, blood count, urinalysis, Mazzini test, and cytological smears of the vagina and cervix showed no evidence of disease. Physical examination showed no abnormalities except chronic cystic mastitis, a slightly enlarged, fibrotic uterus, and what appeared to be acute cystic cervicitis. A biopsy of the cervix was reported as showing actinomycosis. The patient had no history of pelvic disease or operations. Proctosigmoidoscopy, barium enema, and cholecystography were reported negative for evidence of disease. A culture was taken from the cervix eight days after the biopsy but was negative for growth for four weeks. This may have been due to the fact that her private physician, two days after he had received a report of her findings, cauterized the cervix and administered penicillin therapy.

Two months later, after three follow-up letters, the patient returned for repeat culture and biopsy but started to menstruate. Since it was considered best to take cultures in the intermenstrual phase this was deferred for 12 days. Both biopsy and culture were reported negative, although many pus cells and gram-positive rods were present. No sulfur granules were observed. There was nothing in the occupation of the patient or her husband to associate with the disease.

All reports state that this fungus is very frequent in the oral cavity and tonsils after thousands of examinations have been made on supposedly healthy individuals.

CASE REPORT

Lobar Emphysema

Estelle R. DeVito, M.D.

LOBAR EMPHYSEMA, described frequently in recent literature as an acute respiratory emergency in infants, has been recognized as an entity much less frequently in children and adults. The following case report is of a preadolescent girl who demonstrated lobar emphysema concurrently with pulmonary tuberculosis and mucoid impaction of the bronchi.

CASE REPORT

An 11½ year old Puerto Rican girl was admitted to the New York Infirmary on April 30, 1956, with a referral note from her school physician claiming that the child was malnourished. There was also a letter dated April 2, 1956, from Puerto Rico stating that the child should be hospitalized for diagnostic studies since chest roentgenography on Jan. 20, 1956, showed localized emphysema in the region of the right upper lobe.

History revealed cough, slight fever, and anorexia of five months' duration. She was known to have had repeated asthmatic attacks since the age of 1 year. On one occasion, at the age of 7, she was hospitalized in Puerto Rico for diarrhea, vomiting, and fever and had received a blood transfusion. Her history also included measles, mumps, and chicken pox. There was no history of pertussis. The family history was noncontributory except that the mother also had asthma.

Physical examination revealed a markedly underdeveloped and undernourished girl weighing 50.5 lb. and having mild scoliosis. She was afebrile and in no acute distress. The only positive findings were decreased breath sounds in the right upper lobe area and diffuse wheezes and rhonchi. Chest roentgenograms taken on admission (Fig. 1) showed emphysema of the right upper lobe, a nodular density in the right mid-lung field, and small areas of calcification in the right lower lobe and hilum. Laboratory results revealed a normal hemogram except for eosinophilia (7 per cent), a negative urinalysis, and a positive Vollmer patch test. Repeated gastric washings yielded no growth of tubercle bacilli. Tomograms confirmed the presence of emphysema in the right upper lobe, with herniation over to the left side of the chest. A pyelogram taken intravenously revealed a 4 mm. calcification in the left superior major calyceal group. The patient's course in the hospital was uneventful except for two febrile episodes due to intercurrent infection. Because the nodular density on the roentgenogram was thought to represent a reinfection type of tuberculous lesion, she was started on therapy with isoniazid (INH) and aminosalicylic acid (PAS) on May 18, 1956; use of these drugs was continued until and after discharge on Oct. 16, 1956, but was interrupted in March, 1957.

The patient was seen in the New York Infirmary clinic on two occasions in January and April, 1957, but subsequently was followed in the Chest Clinic of the Children's Medical Service at Bellevue Hospital. During the follow-up period at the clinic she was asymptomatic; a Mantoux test (1:1,000) done during this period was markedly positive.

On Aug. 1, 1957, she was admitted to Bellevue Hospital for further diagnostic investigation. She had had an epistaxis five days before admission. Physical examination was essentially normal except for scoliosis. The lungs were clear to percussion and auscultation. Her weight at this time was 68 lb. A hemogram and repeated urinalyses were within normal limits. Gastric and urine cultures repeatedly failed to yield tubercle bacilli. Chest roentgenograms revealed the same findings described previously and seen in figure 1.

Bronchoscopy showed the right main bronchus to be normal. The right upper lobe bronchus and all three segmental orifices were found patent and clear. The right middle lobe and right lower lobe bronchi were patent. A small amount of mucopus in the right

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Fig. 1. Chest roentgenograms, taken on admission, showing emphysema of the right upper lobe, a nodular density in the right mid-lung field, and small areas of calcification in the right lower lobe and hilum.

lower lobe bronchus was seen. Bronchograms (Fig. 2) revealed filling only of the most proximal portions of the right upper lobe segmental bronchi. The right middle lobe was depressed and compressed by the right upper lobe.

Functional studies (see table I) on Aug. 19, 1957, indicated that the patient had a slight reduction in vital capacity and a moderate increase in residual volume and in nitrogen after breathing oxygen for seven minutes with normal arterial oxygen saturation and carbon dioxide pressure (pCO_2). Results indicated that she did not have generalized emphysema but bullous emphysema of the right upper lobe, which was not in wide communication with the bronchus.

Because of the persistence of lobar emphysema of undetermined cause, with herniation into the mediastinum, compression of the right middle lobe, and a discrete nodular density probably of tuberculous

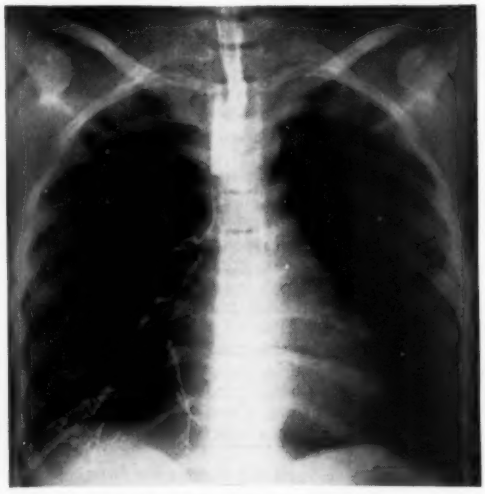

Fig. 2. Bronchogram revealing filling only of the most proximal portions of the right upper lobe segmental bronchi. The right middle lobe is depressed and compressed by the right upper lobe.

TABLE I

Results of Functional Studies Preoperatively and Postoperatively

Tests	Norms Predicted for Age	Preoperatively (8/19/57)	Postoperatively (11/18/57)
Vital capacity, L.	2.3	1.90	1.60
Residual volume, L.	0.6	0.95	0.73
Total lung capacity, L.	2.9	2.85	2.33
Nitrogen (N_2) index	—	2.70	1.10
Residual volume/total lung capacity, %	20	35	23
Maximum breathing capacity, L./min.	75	50	60
Maximum breathing capacity after bronchodilatation, L./min.	—	57	70
O_2 saturation of arterial blood, %	—	96	—
CO_2 pressure of arterial blood, mm. Hg	—	35	—

etiology, a lobectomy seemed indicated. Functional studies also implied that the procedure would be beneficial.

Right upper lobe lobectomy was performed on Sept. 30, 1957. At operation the right upper lobe was markedly overdistended and pale yellow in color, as compared to the middle and lower lobes, which were pink. It occupied two thirds of the right side of the chest and herniated across the mid-line toward the left side of the chest. The middle lobe was partially atelectatic. The entire right upper lobe was noncompressible while the middle and lower lobes ventilated well. The bronchus did not feel unusually flaccid. There was dense fibrous tissue about the main stem bronchus to the right upper lobe, resulting in stenosis of the lumen. Several lymph nodes measuring up to 1 cm. in diameter in this area did not appear to compress the lumen of the right upper lobe bronchus or to impinge upon it. Gelatinous mucoid material was encountered in the right upper lobe near the minor fissure.

Pathology Report. Segments of the right upper lobe measured after injection and formalin fixation: 15 cm. anterior-basal, 8 cm. anterior-posterior, and 3 cm. medial-lateral. The pleural surface was smooth and glistening and the parenchyma was hypercrepitant. There was a supernumerary fissure isolating the posterior segment. The cut surface revealed a very fluffy parenchyma with a small alveolar pattern. The anterior segmental bronchus was markedly dilated, measuring 1.5 cm. in circumference just proximal to the bifurcation. The mucosal surface had a ductlike appearance with an "orange peel" effect in areas. The bronchi of the posterior segment were extremely dilated and thin-walled and were plugged with an opalescent inspissated gelatinous gray substance. The parenchyma throughout was emphysematous and showed no evidence of tuberculosis. A hilar node at the level of the origin of the apical segmental bronchus was slightly enlarged to 0.8 x 0.6 cm. and on cut surface was tannish gray. Sections "A" were from the anterior segmental bronchus and lung parenchyma. Sections "B" were from the posterior segmental bronchus, hilar node, and parenchyma of the apical segment.

Sections "A" demonstrated ectatic bronchi with a moderate increase in peribronchial connective tissue and a mild degree of dilatation of alveolar air spaces. There was minimal thickening of the bronchial arteries. The small bronchi within the parenchyma of the lung were dilated and the lumina were filled with eosinophilic homogenous material containing a few macrophages. A mild peribronchial lymphocytic infiltrate was evident. Some peribronchial air spaces contained similar accumulations. Sections "B" revealed, as previously described, ectatic bronchi and peribronchial fibrosis. In some bronchi cartilage was immature, and, in the wall of one, calcification and bone formation were evident. The apical segment of the parenchyma of the lung showed dilatation of the alveolar air spaces and mucus filling the lumen of bronchioles and bronchi. A hilar lymph node showed normal architecture.

Diagnosis and Postoperative Results. Emphysema, bronchiectasis, and mucoid impaction of the bronchi were revealed, but tuberculosis was not seen in this specimen. The pathologist suggested that the bronchiectasis was probably secondary to an obstructed bronchus. The obstruction of the bronchus, in turn, was possibly due to a tuberculous node, although this was not demonstrated in the specimen.

The child's postoperative recovery was uneventful and she was discharged from the hospital on Nov. 4, 1957. INH and PAS therapy, restarted just before operation, was continued. A roentgenogram postoperatively (Fig. 3) showed the right middle lobe and lower lobe completely expanded to fill the right hemithorax.

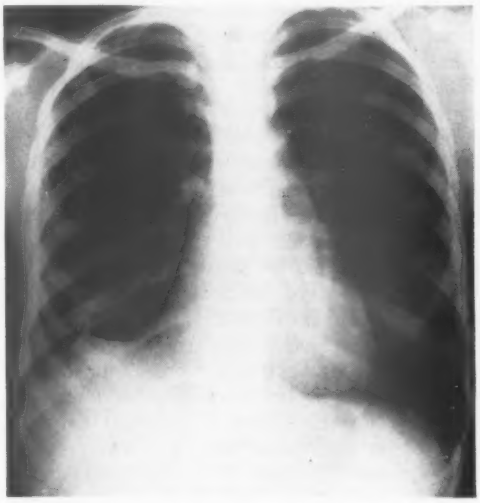

Fig. 3. Roentgenogram postoperatively showing the right middle lobe and lower lobe completely expanded to fill the right hemithorax.

DISCUSSION

Differential Diagnosis. Whenever one encounters a patient with a chest roentgenogram similar to the one presented in this report, the first diagnosis to be ruled out is congenital or acquired cysts of the lung. In a patient with a cyst there are no lung markings in the involved area, in contrast to the fine trabeculations seen in emphysema.[1] Cysts do not herniate through the anterior mediastinum and are usually ovoid in shape. Lobar emphysema is confined almost exclusively to the upper and middle lobes rather than to the lower lobes, where cysts are frequently found.

Etiology. Because of parenchymal and nodal calcification associated with a positive Mantoux test we know our patient had healed primary tuberculosis. It has been demonstrated by a few workers in this field [2, 3] that there is frequent inflammatory involvement of the bronchial mucosa in primary tuberculosis, which is seen on bronchoscopy. In some cases

endobronchial granulations occur, and these can cause either obstructive atelectasis or obstructive emphysema. At the time of operation our patient showed thickening and scarring of the right main bronchus indicative of previous endobronchial disease.

The discrete nodular density seen on the chest roentgenogram, and thought to represent an adult type of tuberculous lesion, was shown by the pathologist to be a dilated bronchus filled with inspissated mucoid material. Mucoid impaction of the bronchi [4] occurs not infrequently in asthmatic patients. This pathological lesion has most often been found in the right upper lobe and usually in patients with a history of repeated respiratory infection due, no doubt, to suppuration behind the bronchial obstruction. However, our patient did not have a history of repeated respiratory infections, nor did 3 of the patients in the series reported by Shaw and others.[4]

Other causes of lobar emphysema were also considered in this case. Bronchial obstruction due to a foreign body, tumor, congenital valves, or viscid secretion were eliminated as a cause by the bronchoscopist, who described a normal bronchial tree. Congenital emphysema of undetermined etiology was considered a possibility, but the pathological findings in our case render this possibility untenable.

Treatment. The treatment of choice probably should be resection of the emphysematous lobe. Needle aspiration usually leads to a tension pneumothorax, which is difficult to control and which may cause death. The functional studies in this case, showing a decrease in the residual volume and increase in lung capacity after operation, also indicate that surgery was the best treatment.

ACKNOWLEDGMENT

The author is indebted to Drs. John Cardona and Adolph Wehrili for the bronchoscopy, to Dr. Juan Filler for the functional studies, and to Drs. William E. Loring and M. Kuschner, the pathologists. The surgeons were Drs. Walter Fischer and James R. Malm.

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EDITH PERITZ, M.D.
Guest Editor

Dr. Edith Peritz, Guest Editor of the New York Infirmary issue of the JOURNAL in August, 1954, once again has collected articles of interest for JOURNAL readers.

Dr. Peritz, born in Breslau, Germany, was graduated from the Medical School of the University of Breslau in 1921. She spent seven years at the largest city hospital in Berlin, the Rudolf Virchow Hospital, first as a rotating intern and then as a resident in the surgical department, whose chief, Prof. Ernst Unger, believed in equal rights for women. She received additional training in plastic surgery in Paris before establishing her practice in Berlin in 1928.

Dr. Peritz left Germany in 1936 and settled in New York City, where she still resides with her husband. She received her medical license a few months later and has maintained a private practice in New York City ever since. In 1938 she became connected with the New York Infirmary, where she now holds the position of attending surgeon. She also has been connected with the Strang Cancer Prevention Clinic for many years.

Dr. Peritz has always been interested in organization work. In Germany she was a member of the student council of the University, president of the Women's Medical Society of Berlin, and a member of the "Chamber of Physicians" of Berlin. She is a member of Branch 14 of the AMWA and of the county, state, and national medical societies. She is also president of the Washington Square Business and Professional Women's Club.

Rheumatic Heart Disease in Pregnancy*

Alice F. Montesa, M.D.

PREGNANCY AUGMENTS THE BLOOD FLOW, and it has been estimated that the work of the heart increases steadily during pregnancy to a level of about 50 per cent above that in the nonpregnant state. It previously was thought that this maximum strain was at, or just prior to, full term, but recently it has been shown that maximum strain occurs toward the end of the ninth lunar month, at which time "lightening" takes place and following which there is much less strain on the heart and hence less failure in patients with cardiac disease in the tenth lunar month. An important factor increasing the blood flow and the work of the heart in the pregnant state is the placental circulation, the effects of which resemble those of an arteriovenous aneurysm. One other general observation of circulatory interest in pregnancy is that the enlarged uterus tends to obstruct the venous return to the heart and to cause stasis in the leg veins.

Studies of pregnant women in this country have shown that about 4 per cent have heart symptoms or signs. Half of these have merely "functional" mitral systolic murmurs (probably associated with slight functional cardiac dilatation of little or no importance) or neurocirculatory asthenia; the other half, 2 per cent of all cases, have organic heart disease.

Heart disease in pregnancy almost always means rheumatic heart disease. The latter is encountered in over 90 per cent of pregnant cardiac patients; congenital cardiovascular lesions occur in 1.5 to 5 per cent, whereas syphilitic, hypertensive, and other types of heart disease are observed only occasionally. Among the rheumatic cardiac cases, mitral stenosis alone, or in combination with aortic valvular disease, occurs in at least 75 per cent.

As compared with the prolonged and increasing strain of pregnancy, that of labor is relatively well tolerated. Nevertheless, it does represent a strain comparable to that of muscular exercise. The oxygen consumption rises during labor. Slight tachycardia occurs during the actual delivery and bradycardia occurs post partum. Labor is associated with a moderate transient elevation in arterial blood pressure and a corresponding increase in the work of the heart. It has been noted that the blood volume, cardiac output, and work of the heart diminish significantly in the eight weeks before term, whereas the fetus continues to enlarge and the oxygen consumption, red blood cell mass, and total body water continue to increase up to term. After labor there is a further reduction in blood volume and a considerable fall in body water associated with marked diuresis. A rise in venous pressure in the first 24 hours after delivery has been attributed to the effects of ergonovine maleate (Ergotrate).That the strain of normal labor is less than that of pregnancy is supported by the infrequency of heart failure in the beginning of, during, or immediately after delivery. On the other hand, if heart failure is present when labor starts, there is a great risk of intensifying the myocardial insufficiency. This is particularly likely to occur in the first 24 to 48 hours post partum.

CARDIOVASCULAR MANIFESTATIONS DURING PREGNANCY

An evaluation of the cardiac status should take into account the frequency of cardiac

*This article was compiled from chapters in: Friedberg, C. K.: Diseases of the Heart, ed. 2, Philadelphia, W. B. Saunders Company, 1956, and Dill, L. V.: Modern Perinatal Care, New York, Appleton-Century-Crofts, Inc., 1957.

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symptoms and signs in pregnant women even without heart disease. These may simulate the manifestations of organic heart disease and heart failure.

Cardiac Symptoms and Signs. Dyspnea, at rest and on exertion, and orthopnea are common complaints, especially in the latter half of pregnancy. The dyspnea may be due to increased respiratory effort to ventilate the deflated lung in pregnancy. Often the dyspnea of pregnancy takes the form of sighing respiration or of inability to take a deep breath, a disturbance of psychic origin. In any event, neither exertional dyspnea nor orthopnea is to be regarded as certain evidence of heart failure without careful evaluation.

Palpitation and tachycardia are frequent, with or without associated dyspnea. Respiratory distress, choking sensations, and palpitation occurring at night may simulate an attack of paroxysmal nocturnal dyspnea; however, cough with frothy or blood-stained sputum and pulmonary rales are not noted. There may be transient basal rales due to compression of the lung by the elevated diaphragm, but these disappear after cough or after a few deep respirations.

Edema of legs develops in about 25 per cent of pregnant women without cardiac disease, especially in the last two months of pregnancy. The association of dyspnea and edema is likely to suggest the possibility of heart failure; however, the edema is a local phenomenon confined to the lower extremities. It is due to compression of the iliac veins by the enlarged uterus and its contents. While an extremely high venous pressure in the lower extremities is probably the chief cause of the dependent edema, the enlarged circulating blood volume, a diminished concentration of blood proteins and of osmotic pressure, and local tissue changes may be contributory factors. That the edema is not due to heart failure may be perceived from the absence of venous engorgement in the cervical veins and from the normal venous pressure in the upper half of the body.

A systolic murmur is audible at some time during pregnancy in most women. Usually it is in the pulmonic or apical region. Diastolic murmurs should be considered as evidence of organic heart disease unless proved otherwise. A third heart sound is frequently audible and may simulate the gallop rhythm of heart failure. The second pulmonic sound is often loud and may be accentuated and reduplicated, especially in the third trimester. A slight tachycardia is the rule, with the highest cardiac rate in the eighth month. Premature beats are not uncommon and may be associated with palpitation.

The electrocardiogram usually shows a left axis deviation and an inversion of T_3 in the first two trimesters. These are due to the transverse position of the heart and resemble the findings in the electrocardiogram of an obese patient. A deep Q_3 as well as the inverted T_3 is encountered in a small percentage of cases and is probably due to the altered position of the heart. Vectorcardiographic changes in pregnancy are similarly related to positional changes.

Diagnosis of Cardiac Disease in Pregnancy. The recognition of organic heart disease, when present, is essential for the proper management of the pregnant women. Due care must be taken not to mistake the aforementioned findings in pregnancy for cardiac disease. Recognition of cardiac disease in pregnancy requires a careful physical, fluoroscopic, and electrocardiographic examination. A diastolic murmur and distinct cardiac enlargement are chief diagnostic features. Since the common heart disease of pregnancy is rheumatic heart disease, careful search should be made for evidence of mitral or aortic valvular disease. The crescendo presystolic murmur of mitral stenosis may be overlooked unless the patient is examined in the left lateral position, preferably after exercise. The murmur may be sharply localized at the apex. The diastolic murmur of aortic insufficiency is often best heard along the left sternal border, with the patient standing and with the breath held in expiration. A loud systolic murmur may be due to rheumatic aortic stenosis. A systolic thrill should be sought carefully. In its absence, pulse tracings may confirm the diagnosis.

Fluoroscopic examination may provide the first clue or the confirmatory evidence of heart disease. Cardiac enlargement should be unequivocal to be diagnostic in itself. The localization of the enlargement may be especially significant: for example, the left atrium and the pulmonary artery salient in mitral stenosis and the left ventricle in association with dynamic pulsations of the ventricle and aorta in cases of aortic insufficiency.

Diagnosis of Heart Failure. Having distinguished the patient with cardiac disease in pregnancy, the physician must evaluate the functional capacity of the heart and make

careful observations to recognize promptly the development of heart failure. A careful history of the patient's exercise tolerance, as determined by her response to various activities in her daily life, is a useful guide to the functional capacity of the heart. Her ability to consummate a previous pregnancy and labor successfully is an important index of cardiac capacity. Since dyspnea and orthopnea occur during pregnancy in patients without heart disease, their usual merit as early clues of heart failure is somewhat vitiated. By careful history-taking and observation the physician may justly conclude that the dyspnea is out of proportion to that attributable to pregnancy and is, in fact, caused by heart failure. Unexplained cough, especially that which occurs on effort, is also a valuable early clue to the possible occurrence of heart failure. Breathlessness may awaken the patient from sleep or may occur after intercourse. The association of cough with frothy or blood-tinged sputum and with persistent rhonchi or moist rales in the chest denotes that the dyspnea and cough are due to left-sided heart failure. Relief of the dyspnea and cough following extreme restriction of salt and one or two injections of mercurial diuretics is a valuable guide in confirming the diagnosis of heart failure.

As a rule, the earliest sign of congestive heart failure is the development of persistent rales at the bases of the lungs. The lungs therefore should be examined regularly and carefully in all patients with cardiac disease throughout pregnancy. Prolongation of the circulation time with or without elevation of the venous pressure is a valuable indication of the presence of heart failure.

Of course, there usually is no difficulty in determining the presence of heart failure when the complete clinical picture is unfolded. The patient is dyspneic even when she exerts herself slightly or when she rests. Complete recumbency is intolerable because of respiratory distress. Mild or moderate cyanosis is common in patients with mitral stenosis and heart failure. Rales are readily audible throughout the lower portions of the lungs. Hydrothorax may be present. The cervical veins become engorged. The liver is enlarged and tender. Edema of the lower extremities is pronounced.

Conduct of Labor. Labor should be permitted to proceed normally in the patient with cardiac disease. During labor and delivery the patient should be propped up as high as necessary and feasible. Vaginal delivery is allowed even in patients with serious heart disease unless there are noncardiac indications for cesarean section. Even in the presence of heart failure it is uncertain that a cesarean section with sterilization should be preferred to delivery from below, with sterilization at a later date if desirable.

The present trend is definitely against interruption of pregnancy in the later months and against cesarean section during labor, for both the maternal and fetal mortality rates are significantly less when normal delivery by the vaginal route is permitted. However, it is desirable to avoid a prolonged second stage by use of the low-forceps procedure. The pulse, respiratory rate, and blood pressure should be followed continuously during labor.

According to Mendelson and Pardee the elevation of the pulse rate above 110 per minute and of the respiratory rate above 24 per minute during the first stage of labor provides usually reliable clues to impending heart failure and the need for appropriate therapeutic measures such as digitalization and oxygen therapy. Fluids intravenously should be given very cautiously and slowly if at all during labor. The fluid should contain no sodium. The patient should be adequately sedated with barbiturates, with morphine, or with meperidine (Demerol).

The competent administration of anesthesia by an experienced anesthetist is important in minimizing the strain of labor. Ether is generally regarded as one of the safest anesthetics and is well tolerated by patients with cardiac disease. A maximal concentration of oxygen should be given with it. Ethylene and oxygen may be employed only for the preliminary induction of anesthesia, and, even then, the most diligent care should be taken to avoid asphyxia. Cyclopropane with oxygen and chloroform have been shunned by many. Low-spinal or continuous caudal anesthesia now is preferred by many, especially for patients with actual or impending heart failure.

Careful observation should not be relaxed immediately after delivery. The rapid onset of acute pulmonary edema or more gradual congestive heart failure may occur during the third stage or at any time in the first 24 hours after delivery. Some physicians apply tourniquets prophylactically during the third stage of labor to all patients who have shown previous evidence of heart failure. Penicillin, 600,000 units, and streptomycin, 2 Gm. daily,

should be given prophylactically during the third stage and continued for three days post partum to avoid bacterial endocarditis. Ergonovine should not be given. Posterior pituitary injection (Pituitrin) should be avoided, but, if essential, only the oxytoxic fraction (Pitocin) should be administered intramuscularly. After delivery an adequate period of bed rest should follow, with care in regard to sodium intake and necessary medicaments.

Acute pulmonary edema is a sudden and sometimes startling incident that occurs sufficiently often during pregnancy or labor to require special mention. It is usually a complication of mitral stenosis and may occur in apparently well-compensated patients and without apparent cause. But, often, it is induced by intravenous administration of fluids. Acute and terrifying dyspnea, with or without cyanosis, cough, frothy sputum, and hemoptysis are the outstanding manifestations.

The prompt administration of morphine may in itself control the attack. The slow intravenous administration of 0.25 to 0.5 Gm. (3.75 to 7.5 grains) of aminophylline in 10 to 20 cc. of 5 per cent glucose in distilled water may also abort the attack. Digitalis or ouabain should be given intravenously. Venous tourniquets should be applied to all four extremities, and if this is ineffective a venesection should be performed. Oxygen should be administered by mask or tent under positive pressure, if there is no evidence of shock. Antifoaming agents, such as ethanol, administered by oxygen aerosol may be beneficial. Rarely a rapid venesection is necessary if other measures fail to control the pulmonary edema. If shock occurs, mephentermine (Wyamine) may be given at once, intravenously and intramuscularly, and a continuous infusion of levarterenol bitartrate (Levophed) set up.

To prevent recurrence of pulmonary edema sodium intake should be curtailed drastically, digitalization should be maintained, aminophylline rectal suppositories (0.5 Gm. aminophylline) should be inserted before retiring, and mercurial diuretics should be administered at appropriate intervals. The prophylactic use of morphine in the 12 hours following labor may prevent the occurrence of post-partum pulmonary edema.

MANAGEMENT OF HEART DISEASE AND HEART FAILURE IN PREGNANCY

The major problem in the treatment of the patient with cardiac disease during pregnancy is the prevention and control of heart failure. To this end it is essential that the presence of cardiac disease be recognized early. The patient with such disease must be registered with her physician early in pregnancy, and regular visits at one or two week intervals should be made, depending on her cardiac status and symptoms. Co-operation with a cardiologist or with an internist interested in the problems of cardiac disease in pregnancy is desirable. Patients with cardiac disease should enter the hospital one or two weeks before the expected date of delivery for proper appraisal of the cardiac status, for planning of delivery procedure, and for the institution of treatment of incipient heart failure, if necessary.

The precipitating causes of heart failure include acute infections, especially those of the upper respiratory tract, overexertion, and excessive sodium intake. These should be avoided as far as possible. Antibiotics should be administered promptly at the onset of infections. If excessive anemia is discovered it should be corrected. Arrythmias should be treated speedily. Sudden weight gain should be regarded as probably due to excessive water retention and should be treated by more rigid restriction of sodium intake and mercurial diuretics.

The well-compensated patient with cardiac disease (class I and some in class II of the New York Heart Association) requires little restriction in activity except for severe and unusual physical exertion. A rigid restriction of sodium intake appears desirable, especially after the fourth calendar month. Digitalis is not given as a prophylactic measure in this group of patients.

A supplementary intake of vitamin B_1 may be necessary because of the added requirements of pregnancy and the possible contributory role of thiamine deficiency in heart failure.

Patients with cardiac disease whose outlook is less favorable because of a poorer cardiac reserve (class III and some in class II), or those with a previous history of congestive heart failure, require greater restrictions regarding physical activity and more rigid regulation. In some instances modified bed rest most of the day, or rest in a chair or chaise longue, may be necessary throughout pregnancy. The intake of sodium should be

reduced to 500 mg. or less daily, if possible. Digitalis therapy should be continued if started during a previous episode of heart failure. Patients with limited cardiac reserve should be hospitalized at least two weeks before term, according to the requirements of the individual case. Patients in class III or IV usually require digitalization.

If heart failure develops in any patient or is already present when the patient is first seen, active treatment should be instituted. Bed rest, at home or preferably in the hospital, is necessary. Digitalization should be effected and maintained. Sodium intake should be restricted to 200 to 500 mg. daily. Mercurial diuretics should be administered every two to seven days, according to the need and response. If there is evidence of infection, thiamine deficiency, anemia, or hypoproteinemia which might contribute to the development of heart failure, these factors should be eliminated or corrected by appropriate measures. The intravenous introduction of fluids containing sodium (chloride, plasma, or blood) should be avoided.

In the presence of heart failure during the first three months of pregnancy, an abortion by dilatation and curettage should be effected after treatment to control the heart failure.

In cases of heart failure noted later in pregnancy, labor should not be induced until after the seven calendar months have elapsed, that is, until after the fall from the peak of the circulatory burden. It is unnecessary to terminate pregnancy before term in order to avoid the strain of labor, since heart failure rarely begins in labor and since the strain of labor is less than that of pregnancy in the seventh calendar month.

INDICATIONS FOR DISCOURAGING PREGNANCY AND PERFORMING THERAPEUTIC ABORTION

The physician is frequently confronted with the question of advising women with heart disease whether they may safely undertake pregnancy and child-bearing or whether they may continue if already pregnant. Often there are associated religious, socioeconomic, and personal factors that may be decisive regardless of medical considerations. The physician's advice should consist chiefly of providing the patient with the known data as to prognosis, especially as applied to her own cardiac status. Having been apprised of the facts, she herself must decide whether her desire for a child outweighs the probable risk.

Pregnancy may be undertaken by the well-compensated patient with cardiac disease with only slightly more risk than by the normal woman. In borderline cases she is more justified in undertaking pregnancy for the first or second child than for the third or fourth. Pregnancy should be undertaken, and the family completed, relatively early in life, since the diseased heart becomes less capable of tolerating the load of pregnancy with advancing years.

Patients whose outlook is relatively unfavorable (class III and IV) or those with signs or a history of heart failure, atrial fibrillation, or a complicating serious disease should be impressed with the considerable risk of becoming pregnant.

If the problem is one of terminating rather than of undertaking pregnancy, advice varies according to the duration of pregnancy, religious and legal considerations, and the clinical status of the patient. Although the risk to life among well-compensated patients is only slightly enhanced by pregnancy, under special circumstances abortion by cervical dilatation and curettage is permissible during the first two months if the patient desires to terminate the pregnancy. This is particularly advisable if there are already three or more children or if the responsibilities involved in raising a family are likely to endanger the patient's health.

Among unfavorable cases termination of pregnancy should be encouraged if the patient is seen in the first three months of pregnancy and a satisfactory control of heart failure cannot be readily effected. Interruption can be done from below in the first two months or by abdominal hysterotomy, if absolutely necessary, from the third to the fifth month. Thereafter, the risk is less if the patient is treated for her cardiac disability and allowed to go to term.

PROGNOSIS

In heart disease and pregnancy a correct estimate of the prognosis is of paramount importance because on it largely rests the management of the case. The estimate must be well balanced in this more than in almost any other condition, for through excessive pessimism the child will be needlessly sacrificed

and through undue optimism catastrophe to the expectant mother may result. There is no "playing safe" in this field; but, the prognosis is as difficult as it is important. Many attempts have been made to set up standards whereby the prognosis could be guided. There has been much discussion about whether the prognosis should be based upon the structural change in the heart or upon its functional capacity. Sometimes, as pregnancy advances, a patient must be transferred to a less favorable class. In such cases the term of pregnancy at the time the change occurs and the rate of change may influence the prognosis.

As early as 1894 Sears suggested a prognostic classification based on the functional ability of the patient. Similar classifications have since been used by others, but the first system to gain wide acceptance was the one that Pardee proposed in 1922. It was fundamentally that of the American Heart Association, but was modified by the effect of pregnancy and the response to a certain effort (dumbbell-swinging). Pardee's modification, however, was soon superseded by the classification exactly as recommended by the American Heart Association:

Class 1. Patients suffering from organic heart disease, able to carry on ordinary physical activity without discomfort

Class II. Patients suffering from organic heart disease, unable to carry on ordinary physical activity without discomfort

a. Activity slightly limited

b. Activity greatly limited

Class III. Patients suffering from organic heart disease, showing definite symptoms of heart failure when they are at rest

In 1952 the American Heart Association reclassified organic heart disease, basing their divisions on a functional capacity estimation and a therapeutic classification of activity permitted. This functional classification is as follows:

Class 1. Patients with cardiac disease and no limitation of physical activity. Ordinary physical activity does not cause discomfort. Patients in this class do not have symptoms of cardiac insufficiency nor do they experience anginal pain.

Class II. Patients with cardiac disease and slight limitation of physical activity. They are comfortable when at rest. If ordinary physical activity is undertaken, discomfort results in the form of undue fatigue, palpitation, dyspnea, or anginal pain.

Class III. Patients with cardiac disease and marked limitation of physical activity. They are comfortable when at rest. Discomfort in the form of undue fatigue, palpitation, dyspnea, or anginal pain is caused by less than ordinary activity.

Class IV. Patients with cardiac disease who are unable to carry on any physical activity without discomfort. Symptoms of cardiac insufficiency or of the anginal syndrome are present, even when they are at rest. If any physical activity is undertaken the discomfort is increased.

Functional capacity does not always determine the amount of physical activity that should be permitted. The following classification (therapeutic) was first prepared by the New York Heart Association:

Class A. Patients with cardiac disease whose physical activity need not be restricted

Class B. Patients with cardiac disease whose ordinary physical activity need not be restricted, but who should be advised against unusually severe competitive efforts

Class C. Patients with cardiac disease whose ordinary physical activity should be moderately restricted, and whose more strenuous habitual efforts should be discontinued

Class D. Patients with cardiac disease whose ordinary physical activity should be markedly restricted

Class E. Patients with cardiac disease who should be at complete rest, confined to bed or chair.

One simple aid in estimating prognosis is the heart rate at which the patient develops congestive failure. If 2 patients with mitral stenosis and auricular fibrillation present the same degree of cardiac failure but 1 has a heart rate of 130 per minute and the other a rate of 80 per minute, in general, it may be said that the prognosis is better in the one with the rapid rate. Here it is evident that digitalis and other treatment may be expected to slow the rapid rate and effect a good deal more improvement than when the rate is already slow. In other words, when the heart rate is slow and there is considerable peripheral edema, not so much improvement can be expected as when the rate is rapid. This is especially true when the disturbance is one in which it may be predicted that slowing will be obtained, such as is the case in patients with auricular fibrillation.

The size of the heart is of some importance in judging prognosis. The larger the heart,

other things being equal, the poorer the prognosis.

SUMMARY

Heart diease in pregnancy almost always means rheumatic heart disease and is encountered in over 90 per cent of pregnant patients with cardiac disease. Of rheumatic cardiac cases, mitral stenosis alone, or in combination with aortic valvular disease, occurs in at least 75 per cent. Cardiovascular manifestations during pregnancy should not be mistaken as signs and symptoms of heart disease unless properly evaluated by careful physical, fluoroscopic, and electrocardiagraphic examination.

Labor should be permitted to proceed normally in the patient with cardiac disease. Vaginal delivery is allowed even in patients with serious heart disease unless there are noncardiac indications for cesarean section. The second stage of labor can be shortened by the use of a low-forceps procedure.

If heart failure is noted later in pregnancy, labor should not be induced until after the seventh calendar month has elapsed, that is, until after the fall from the peak of the circulatory burden. To terminate pregnancy before term in order to avoid the strain of labor is unnecessary, since heart failure rarely begins in labor and since the strain of labor is less than that of pregnancy in the seventh calendar month.

A correct estimate of the prognosis is of paramount importance in the management of the case. There have been many standards set up whereby the prognosis could be guided, such as structural change and functional capacity of the heart. A patient belonging to one classification may be reclassed as pregnancy advances, which, therefore, changes the prognosis.

The Positive Approach

The elimination of fear and misinformation about heart disease is the most urgent problem in cardiac rehabilitation today. Actually, rehabilitation includes development in the patient of a healthy and optimistic state of mind, as well as improvement of functional capacity. Both are important if the patient is to become a productive and independent member of society.

The process of rehabilitation begins when the patient is first aware of the disease or, at the latest, when he has sufficiently recovered from acute illness to be free of pain and in no immediate danger of death. The need for rehabilitation exists in all forms of heart disease, and patients in all economic classes can benefit from a program of this kind. Even though the disease process may be relatively unstable, all patients are eligible for rehabilitation. (From *The Heart Bulletin*, Pennsylvania Edition, March-April, 1958.)

Tay-Sachs' Disease and Allied Disorders

A new nonprofit foundation has been established to support and stimulate research, clinical, and educational programs in Tay-Sachs' disease and allied heredofamilial, neurodegenerative diseases of infancy and childhood. The scope of the program will include, in addition to Tay-Sachs' disease, Niemann-Pick's disease, infantile Gaucher's disease, Schilder's disease, diffuse sclerosis, amyotonia congenita, Friedreich's ataxia, and others. The foundation is known as National Tay-Sachs Association, Inc., New York Chapter, and is composed of parents who have had afflicted children, of interested laymen, and of medical personnel in the field.

Christmas Disease

Amelia L. Castro, M.D.

CHRISTMAS DISEASE, or plasma thromboplastin component (PTC) deficiency, is a constitutional anomaly of blood coagulation which, like classical hemophilia, depends on the hereditary transmission of a sex-linked, recessive Mendelian trait that becomes manifest as a deficiency of a plasma component essential for the coagulation of blood. Because it so closely resembles classical hemophilia, it also has been called hemophilia B. The disorder was first recognized in 1952 by Aggeler and co-workers,* although five years before that the observation was made that the clotting time of mixtures of the blood of 2 patients, thought to be suffering from hemophilia, was mutually corrective. PTC deficiency mimics hemophilia so completely that workers have apparently studied the disease when they assumed they were dealing with hemophilia.

ETIOLOGY AND PATHOGENESIS

The disease is a hereditary one, characterized by abnormal bleeding, the basic cause of which is an absence or marked diminution of PTC or the "Christmas factor." Like the antihemophilic factor (AHF), PTC participates in the first stage of coagulation; that is, in the formation of thromboplastin. Although the exact role of PTC in the coagulation scheme is not yet well delineated, the recent work of Biggs and others, using a technique for the measurement of human thromboplastin evolution, clearly indicates the essential nature of PTC for thromboplastin formation. Deficiency of this component produces a lag in the formation of thromboplastin, a fact that accounts for the prolongation of the coagulation time of whole blood. In addition to this delay in the appearance of thromboplastin, a decrease in the total amount formed is manifest, this fact being indirectly reflected in the poor conversion of prothrombin to thrombin. These two defects, namely, delay in production and poor yield of thromboplastin, also can be demonstrated in true hemophilia, indicative of the closely associated roles of PTC and antihemophilic globulin (AHG). How these two agents are related is still unknown, but a lack of either one can be determined by the prothrombin consumption time or thromboplastin generation test. Unlike the AHF, PTC is not consumed in coagulation and is present in good concentration in serum. It is heat-labile but storage-stabile. It is not found in Cohn plasma fraction I, but is present in fractions III and IV. It is precipitated by 40 to 50 per cent ammonium sulfate, rather than by 30 per cent, and it is adsorbed by barium sulfate and removed by a Seitz filter, whereas AHF is not.

INHERITANCE

In the majority of affected families the inheritance of Christmas disease is of the same sex-linked recessive pattern as true hemophilia, resulting in the transmission of the disease to male grandchildren through an unaffected daughter. The sons of an affected male are themselves normal and cannot transmit the defect to any of their descendants. The daughters of an affected man, all outwardly normal, are capable of transmitting the trait as an evident defect to half of their

*An extensive bibliography for this disease entity, covering the years between 1952 and 1957, was published in the *Journal of the American Medical Women's Association* in September, 1957, on pages 282 and 283 of an article entitled "Plasma Thromboplastin Component (PTC) Deficiency," by Paul M. Aggeler, M.D., M. Silvija Hoag, M.D., and Ralph O. Wallerstein, M.D. For three later references not given in the aforementioned article, see the end of this article.

Dr. Castro is an intern at the New York Infirmary.

sons and as a recessive or hidden characteristic to half of their daughters.

In a small number of instances, however, heterozygous women have been found to be mildly affected, suggesting that the Christmas disease gene may be less completely recessive than that responsible for hemophilia. That the trait may not always be completely recessive in a heterozygous female carrier is evident by the report [1] of decreased thromboplastin generation in the asymptomatic mother of a severely ill patient with PTC deficiency and by the description of spontaneous ecchymosis and postoperative bleeding in the mother of another victim of the disease.

INCIDENCE

Although the exact frequency of PTC deficiency is not known, current studies indicate that it is probably not a very rare condition. Restudy of groups of cases, previously considered to be examples of classical hemophilias, indicate a ratio of hemophilia to PTC deficiency as follows: Biggs and associates, 9 to 1; Rosenthal, 4 to 1; Frick, 8 to 1; Fantl and Sawers, 6 to 1; Spaet, 5 to 1; and Beaumont, 7 to 1. In Quick's series of cases[2] 70 were found to be hemophiliacs, 30 had mild to severe cases, and only 11 had PTC deficiency. In 3 instances, combined hemophilia and PTC deficiency has been reported.

PATHOLOGY

The findings are those produced by hemorrhages. The bone marrow may show signs of moderate activity as a result of the bleeding. Other than some hyperplasia of the myeloid and erythroid elements, nothing significant is found.

CLINICAL PICTURE

Habitual hemorrhage from various parts of the body, either spontaneous or following slight trauma, is the outstanding symptom of the disease. The bleeding is of the nature of persistent, slow oozing, which is out of proportion to the extent of injury. Instead of minutes, hours, days, and even weeks measure its duration. The patient usually presents a history of severe bleeding episodes from earliest infancy and some abnormal bleeding tendencies in other male members of the family in accordance with the characteristic hereditary pattern. In mild cases bleeding episodes rarely occur, except after an injury or surgical procedure.

There may be bleeding into external, subcutaneous, intramuscular, intravisceral, or hollow cavities. External bleeding is usually more frequent in infancy and early childhood. Since the disease is present at birth, circumcision is always invariably complicated by prolonged and excessive bleeding. Hematomas of varying sizes are common even in fairly mild cases, especially during childhood. These are found mostly on the arms and legs. Bleeding into subcutaneous and muscle tissues may be very serious. A surprisingly large amount of blood may be lost by hemorrhage into large muscles, which may result in anemia and occasionally even produce shock. The most sinister aspect of deep hemorrhage is the effect of pressure on surrounding structures. If a nerve trunk is affected, excruciating neuritic pain may result, complicated by sensory disturbances, paresthesias, and even muscle atrophy. Pressure on blood vessels may block circulation and thus cause gangrene. Gastric hemorrhages, hemorrhages into the mesentery, retroperitoneal bleeding, hemarthroses, and hematuria may occasionally be encountered.

LABORATORY EXAMINATIONS

Significant laboratory findings consist of a prolonged clotting time by the Lee-White method, delayed prothrombin consumption, and defective thromboplastin generation. Laboratory studies consistently show normal values of platelet count, clot retraction, prothrombin time, bleeding time, and tourniquet test. Studies of bone marrow and peripheral blood are normal except when the red blood cell level is depressed after hemorrhage. Bone marrow studies are not indiciated in this condition.

DIAGNOSIS

The first step in establishing the diagnosis of PTC deficiency is to differentiate it from true hemophilia and plasma thromboplastin antecedent (PTA) deficiency. This cannot be done on the basis of the clinical picture alone. In the study of a series of patients with hemorrhagic diseases, Rosenthal noted the following differences: Hemorrhage is most severe in

AHG deficiency, followed in severity by PTC and then by PTA deficiency. Involvement of joints is frequent in AHG deficiency, occasional in PTC deficiency, and rare in PTA deficiency. PTA deficiency is most prominently characterized by bleeding after tooth extraction or other minor surgical procedures.

In the differentiation of hemophilia, PTC deficiency, and PTA deficiency, the following procedures have been employed:

1. Normalization of the prothrombin consumption time by the addition of the deficiency factor. The differentiation is made as follows: If the consumption of prothrombin is corrected by the addition of barium sulfate or calcium phosphate-treated plasma, the deficiency is either thromboplastinogen or PTA; if rectified by aged serum, the lacking factor is PTC or PTA. Obviously, PTA deficiency is manifested by correction with either adsorbed plasma or aged serum.

2. Mutual correction by mixing plasma with known and authentic hemophilic-,PTC-,and PTA-deficient plasmas. To differentiate true hemophilia, PTC deficiency, and PTA deficiency, representative plasmas of these three entities are required. The results of mixing these plasmas supply data that should permit identifying the defect, since mutual correction is effected by mixing any one with either of the other two. Thus, hemophilic blood is corrected by blood or plasma lacking either PTC or PTA.

3. Thromboplastin generation test. This test consists of generating thromboplastin by the mixture of aluminum hydroxide-treated plasma (source of thromboplastinogen), platelet extract, and serum (source of PTC and PTA). If defective thromboplastin generation occurs when the patient's plasma, platelet extract, and serum are used, the test is repeated with the substitution of normal aluminum hydroxide-adsorbed plasma. This should cause correction if the patient is a true hemophiliac or has a PTA deficiency. If normal serum corrects the generation, the diagnosis of PTC or PTA is suggested.

4. Study of the blood of a true hemophiliac and a patient with PTC deficiency by means of the prothrombin consumption test with its three modifications—addition of thromboplastinogen activity time reagent (TAT), hemolysate, and aged serum—which give characteristically different patterns of results. It will be observed that in true hemophilia, the severity of the bleeding tendency corresponds fairly well with the clotting time and the prothrombin consumption time and that no correction is effected by the addition of aged serum. In marked contrast, the clotting time and prothrombin consumption time are not as distinctly correlated in PTC deficiency, but the correction with aged serum is unmistakable and, therefore, is of great diagnostic significance.

TREATMENT

If the theory is accepted that Christmas disease is due to the inheritance of an anomaly of coagulation, cure cannot be expected. Theoretically, the disorder might be eliminated by proper restriction of marriage, or at least of propagation. Although it is true that only one half of the daughters of a female carrier inherit the trait and are able to transmit it, there is no way of distinguishing the normal daughters from the bearers of this hereditary anomaly.

In the management of this disease, the prevention of injuries is of paramount importance. Surgery of all forms, including tooth extraction, should be avoided and, when essential, must be done only after proper preparation of the subject.[3] If a surgical measure must be carried out, the patient should receive adequate amounts of PTC factor prior to and, if indicated, following the procedure.

Treatment should be directed toward control of bleeding by direct or local measures, reduction of any existing stress, and effective replacement of the deficient clotting factor by the administration of appropriate substances. It should be remembered that bleeding occurs almost always as the result of mechanical injury to the vascular system. Due to defective hemostasis, blood continues to be ejected until the pressure outside the vessel counterbalances the intravascular pressure. Two measures, therefore, are of great value in local treatment: (1) the application of pressure to assist the natural tissue resistance, thereby limiting the extent of the extravasation of blood; and (2) the application of cold to cause reflex contraction of blood vessels.

In cases of bleeding from accessible sites, topical thrombin is the hemostatic agent of choice. Coagulating snake venoms are also of some value. In an emergency, a sponge soaked in normal plasma or whole blood may be applied to the bleeding site. Astringents, corrosive agents, and cautery should never be employed, because the resulting necrosis accentu-

ates the bleeding. Antibiotics can be regarded as important hemostatic agents even though their action is indirect. By preventing infection with antibacterial agents, the bleeding is either aborted or brought under control. Intramuscular injections should be avoided, for coagulating substances given in this way are not only ineffective but may produce a hematoma, followed by serious consequences.

Any hemorrhage that cannot be controlled by local measures requires systemic therapy to improve the hemostatic efficacy of the blood. In a bleeding crisis normal coagulation of the blood should be restored by administration of the effective component and maintained as such until the crisis has passed. So far, the only successful method of treatment that has stood the test of time is transfusion of blood or plasma. Repeated transfusions of whole blood may lead to an accumulation of iron and other undesirable consequences; it therefore is advisable whenever possible to give type-specific plasma. Fortunately later studies have shown that the coagulation time is restored not only by fresh, or properly collected, stored blood or plasma but also by blood or plasma collected in the routine fashion, by Cohn fraction IV, and even by serum. The fact that stored blood is as good as, or better than, fresh blood in the treatment of this condition, and the observation that the beneficial effect may last two or three weeks rather than a matter of hours, gives these patients a considerable advantage over those with hemophilia.

The rest of the management is purely symptomatic.

PROGNOSIS

The outlook today is most encouraging. The current progress in understanding the disease cannot help paving the way for developing better methods for the medical care of the patient. The greatest number of deaths has been due to exsanguination after surgical procedures—circumcisions, tooth extractions, tonsillectomy, and lancing of hematomas. Even now, very few die from bleeding, and the time should arrive when crippling from hemarthroses and other hemorrhages will no longer be common.

SUMMARY

Christmas disease, or PTC deficiency, is a hemorrhagic disease characterized by prolonged, whole blood coagulation time, caused by the delayed formation of thrombin. Diagnosis is made on the triad of a bleeding tendency beginning early in a man's life, a positive family history, and a lack of plasma thromboplastin component in the blood. The latter is quantitatively estimated by the prothrombin consumption test and thromboplastin generation test. Treatment is both local and systemic, with the transfusion of fresh blood, or plasma, or even serum. Because its clinical picture closely simulates hemophilia, it is important that every case of supposed hemophilia be revaluated and the specific deficiency revealed as a prerequisite to a rational approach to therapy. Matching or mixing studies and evaluation of the corrective effects of normal serum and barium sulfate-treated plasma are essential for the identification of the type of defect.

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Medical Briefs

PSORIASIS

Dr. Peter Flesch and associates of the University of Pennsylvania told the American Academy of Dermatology and Syphilology that, in the skin affected by psoriasis, a stubborn, disfiguring skin disease, three tissue-building amino acids and sugars behave abnormally. This first step in understanding the chemical nature of psoriasis may ultimately open the way to control of the disease.

CONSTRUCTION PROGRAMS

The Department of Health, Education, and Welfare in April reported an increase of about 130 million dollars in contracts to be let during the next few months under three federally aided construction programs. In these programs, the Department makes grants to add to local funds for building medical research facilities, hospitals, and municipal waste treatment plants.

The largest increase is in the building of medical research facilities by universities, hospitals, and other institutions. A 1956 law authorized Federal grants of 30 million dollars a year for three years to assist in such construction. Contracts to be let this fiscal year under this program have been increased from an estimated 120 million to 182 million dollars.

In the hospital construction program, contracts to be let this fiscal year have been increased from an estimated 381 million to about 405 million dollars. The Federal share would be about 135 million dollars.

Contracts to be let this fiscal year for building municipal waste treatment plants will increase from the original estimate of 170 million to 215 million dollars. The Federal share is 57 million dollars.

Officials of the Public Health Service, which administers all three of the programs, praised state and local agencies and private institutions for excellent co-operation in efforts to step up construction work.

3-METHOXY NOREPINEPHRINE IN HUMAN TISSUES

An amine, or nitrogen-containing chemical, closely related to the adrenal hormone norepinephrine, has been found in human tissues for the first time by investigators at the National Heart Institute in Bethesda, Md. The new amine, 3-methoxy norepinephrine, is of basic interest because it is derived from norepinephrine and may play a role in the normal metabolism of this physiologically important amine in man.

Dr. Albert Sjoerdsma and William King, of the Laboratory of General Medicine and Experimental Therapeutics, and Dr. Sidney Udenfriend and Lemuel Leeper, of the Laboratory of Clinical Biochemistry, found the new amine in norepinephrine-producing adrenal tumors (pheochromocytomas) removed from patients with hypertension that had resulted from the tumors.

Norepinephrine (and its precursors and derivatives) is of particular interest to the Heart Institute, not only in connection with its well-known stimulating effects on the heart and blood pressure, but also because Heart Institute findings have implicated brain norepinephrine, together with another amine (serotonin) in the brain, in the central regulation of the two divisions (sympathetic and parasympathetic) of the autonomic nervous system. Thus "automatic" functions such as blood pressure, heart rate, and emotional states appear to be regulated by release in the brain of the two amines, norepinephrine and serotonin.

During their studies of the metabolism and functions of these amines, Drs. Sjoerdsma and Udenfriend became interested in the 3-methoxy derivative when investigators at the University of Utah reported a 3-methoxy end product of norepinephrine metabolism in the urine of patients receiving norepinephrine injections to support failing blood pressure. Dr. Julius Axelrod, also of the National Institutes of Health, subsequently found, in rat liver, enzymes that converted norepinephrine to 3-methoxy epinephrine. These discoveries prompted the Heart Institute investigators to look for the 3-methoxy derivative in human tissues. They found 3-methoxy norepinephrine, as well as the usual large quantity of the parent amine, norepinephrine, in the adrenal gland tumors.

Their continuing studies on these amines are aimed at learning what role they may have in the body—especially what part they play in the control of blood pressure and heart function.

World Health Organization

WHO IN 1958

The World Health Organization, with headquarters in Geneva, Switzerland, now groups 88 countries with the aim of protecting the health of all peoples. WHO works with national health services to prevent infectious disease (malaria, tuberculosis, syphilis, and others), and to train health workers. It gives technical assistance to improve sanitary conditions in over 100 countries, warns of outbreaks of epidemic disease, co-ordinates research, and recommends international standards for drugs and vaccines.

Dr. M. G. Candau is Director-General, in charge of a staff (including field staff) of about 1,000 professionals of 54 nationalities. WHO's budget, contributed by member states, is $13,500,000 for 1958.

WHO celebrated its tenth anniversary this year at a special session of its governing body, the World Health Assembly, held in Minneapolis on May 26.

SANITATION

Everybody knows, of course, that the one thing that the house mouse most enjoys is cheese . . . and everybody, as usual, is wrong. Researchers into its predilections have found that the house mouse rarely eats cheese if there is a choice of food, and that what really attracts it is rolled oats.

And here goes another cherished illusion: "The domesticated cat has long been accepted, rather uncritically, as the main stand-by in keeping down house mice . . . observations have made it quite clear that large numbers of mice can survive quite successfully in spite of cats."

The mouse, for its size, is a much better trencherman than the rat. A medium-sized brown rat eats an amount equal to about one tenth of its own body weight each day. The house mouse, on the same basis, eats twice as much.

The rat is, of course, a greater menace to human health, although most disease organisms carried by rats may also be carried by mice. In fact, there is no doubt of the susceptibility of the mouse to the plague bacillus, and plague-infected mice have been reported from places as far apart as Australia, India (Calcutta), and Peru. One disease that can definitely be attributed to their activities is favus, or ringworm.

Probably the most serious offense of the house mouse against human health is its spreading of *Salmonella* organisms, responsible for human cases of food poisoning. Its importance as a disease carrier, however, is small compared with its attack on man's food resources, since it spoils and makes unfit for human consumption a far greater amount of food than it eats.

In very cold weather a mouse may eat up to a third more food than usual, in order to maintain body heat. At the other extreme, it needs protection against excessive heat, and one experimenter has demonstrated that exposure, in still air, to direct sunlight killed a mouse in five minutes. However, when it comes to thirst, the mouse can outlast man himself, and it was recorded in 1859 that a house mouse, accidentally sealed in a barrel of biscuits in Aberdeen (Scotland), was alive when the barrel was opened in the Canadian Arctic more than 14 months later.

P. S. In order to get the best haul from your mouse traps you should set them early in the evening . . . mice are most active between 8 and 9 p.m. (From "Control of Rats and Mice," Vol. II, Edited by H. N. Southern, Oxford, England, Clarendon Press, 1954.)

OCCUPATIONAL DISEASE

The prevalence of peptic ulcers among business executives over 50 years of age was 78.43 per cent, compared with 23.56 per cent among other employees of the same age, according to a recent study in the United States. In another study of 5,000 executives chosen from 30 American companies, large and small, it was found that 51.3 per cent between the ages of 40 and 65 suffered from either hypertension, organic heart disease, overweight, or such serious findings as diabetes, prostatitis, hernia, and blood deficiencies.

It is noteworthy, however, that more than half of the executives examined showed no symptoms and expressed no complaints. (From *World Health*, Jan.-Feb., 1958.)

President's Message

Since this number of the JOURNAL is the New York Infirmary issue, I think it appropriate to use this subject as my theme. Recalling that the New York Infirmary celebrated the one hundredth anniversary of its founding in 1953, we must recognize not only its value as a hospital but its potency as a symbol of the pioneer spirit of women in medicine. In considering, then, these women in their achievements through the years, we realize that they possessed special qualities to enable them to carry on so courageously the work begun in good faith by Elizabeth Blackwell in 1853.

Data on the growth, staff, bed capacity, and equipment may be gleaned from many sources; but, to note one item, please turn to page 117 of the March, 1950, number of your JOURNAL and learn that, up to that year, statistics showed that over one million persons had received care, often free or at low cost, either as inpatients or outpatients. In the eight years since that date, the number has greatly increased to make it a truly remarkable record.

A word of tribute seems appropriate to other great leaders who have contributed to the advancement of women, such as Elizabeth Cady Stanton, Frances Willard, Clara Barton, and Susan B. Anthony, to mention some of the outstanding ones. To the last-named, we owe gratitude for one of our most precious privileges—that of voting citizenship. Miss Anthony possessed many sterling qualities. One outstanding one is exemplified in this quotation from "Dramatic Sketches of Susan B. Anthony," by Nanette B. Paul, when Miss Anthony said to a reporter, "I have never lost faith, not for one moment in 50 years." Surely, Elizabeth Blackwell proved that she never lost faith, and she lived to see the number of women physician graduates increase from one, in 1849, to 500, in 1870. What a satisfaction this must have been to her! And, yet, this accomplishment did not, in any way, dampen her ardor to open other doors to women physicians.

Furthermore, we see in this story that there have always been certain women physicians ready to pick up the threads of work where one leader has laid them down. This continual effort at the New York Infirmary on behalf of women's medical service to humanity should be applauded and may well serve as a model for future endeavors. The attitudes of the staff should also receive approbation for steadfastness toward a goal, unselfish service, and indefatigable work. Recognition of the value of research and experimentation, as well as of adequate service, has led not only to the maintenance of a good hospital but to the expansion of it without relinquishing the policy of high medical standards. Because these women have tenaciously held their ground on standards, policy, and service, they have gained respect from the entire medical profession. We are proud to add our tribute.

Katharine W. Wright

New AMWA President—1958-1959

KATHARINE W. WRIGHT, M.D.

The forty-third president of the AMWA is well fitted for this important position, for she is a dedicated physician noted for her energy, vigorous intellectual approach to problems, and ability to be well prepared for any task she assumes.

Dr. Katharine W. Wright was born in Montgomery County, Maryland, where her father, Dr. George H. Wright, practiced for many years. Her mother, Jessie Waite Wright, was the daughter of Judge C. B. Waite of Chicago and Catherine Van Valkenberg Waite, who studied law after her five children were partly grown. Dr. Wright's mother was in the first class of women who were graduated from the University of Chicago.

Dr. Wright received her B.S. degree from the University of Wisconsin and her M.D. degree from George Washington School of Medicine. She was certified as a psychiatrist by the American Board of Neurology and Psychiatry in 1945.

She served as physician, Elgin (Illinois) State Hospital, 1940-1943; as research assistant in psychiatry, University of Illinois, 1942-1946; as associate, Psychopathic Hospital, Chicago; and as neuropsychiatric consultant, Mary Thompson Hospital, Chicago, where she is director of the Mental Hygiene Clinic. She holds the academic position of associate, Department of Neurology and Psychiatry, Northwestern University, and is a fellow of the American Psychiatric Association and the Institute of Medicine, Chicago.

She holds membership in many professional societies: AMA, Illinois Psychiatric Society, Chicago Medical Society, Illinois State Medical Society, George Washington Medical Society, Menninger Foundation, and George Crerar Library. She is also a member of the American Association of University Women and Chi Omega.

Dr. Wright became a member of the AMWA in 1936. She served as president of Branch Two, Chicago, as director of the Northeast Central Region of AMWA, and as recording secretary of the Association. She has represented the AMWA at many European meetings of the Medical Women's International Association and will serve as one of five AMWA councilors at the Eighth Congress of the MWIA.

Dr. Wright lives a very full life, and her interest in travel and medical research is well known to her friends. While touring Russia in September, 1956, she managed to visit a psychiatric institute and her keen eye and discerning mind quickly appraised the psychiatric practices in the U.S.S.R. The pithy report of her medical impressions is now on file with the Public Health Service.

Her subtle sense of humor and generosity, make her a delightful traveling companion, and any group is richer for her presence. In all public relations Dr. Wright has ably demonstrated qualities of fair and impartial judgment and the wisdom of experience in handling people.

After 40 years of happy married life Dr. Wright's husband, Lewis A. Wright, a lawyer, died in 1956. With her customary faith and courage she plunged into AMWA activities with greater enthusiasm and continued her busy psychiatric practice. Her two daughters and one son live in different sections of the United States, but she manages to visit them regularly and enjoys her 11 grandchildren. Her hobby seems to be buying sweaters for her grandchildren, although she sometimes forgets which child belongs to which of her children.

Katharine W. Wright is a natural leader and fine executive. Her services as a physician, psychiatrist, teacher, and friend enable her to give much to others.

—Alma Dea Morani, M.D.

INAUGURAL ADDRESS OF NEW AMWA PRESIDENT

Group Participation—Keynote of the Future*

Katharine W. Wright, M.D.

IT IS A PRIVILEGE to be chosen as president of the American Medical Women's Association for the ensuing year and thus to follow the leadership of so many outstanding women physicians.

My subject speaks of the future, but, before plunging into that unknown area, let us briefly review the past. For this purpose, I culled many of the back issues of the JOURNAL to reread presidents' messages. Each one was of high quality and, with sincerity and earnestness, urged the members to remember the high standards of women in medicine. I ask the same of you.

Further research revealed the fact that the inception of the organization by Bertha Van Hoosen took place in 1915 at the Fiftieth Anniversary Meeting of the founding of the Women and Children's Hospital in Chicago, but it is interesting to note some events that preceded this occasion. In 1904 Dr. Van Hoosen was the only woman to attend the American Medical Association meeting in Atlantic City, and she missed the companionship of other women; therefore, in 1908, at the meeting in Chicago, she initiated the custom of the dinner for women physicians. Seven years later this group denounced the idea of organizing the medical women because it was considered segregation; however, Dr. Van Hoosen continued her efforts until, at the Fiftieth Anniversary Meeting in Chicago, she was successful.

Many other items of interest were discovered, but I will mention only a few: the launching of the JOURNAL as the official organ of the Association in April, 1946, under the editorship of Dr. Elise L'Esperance, and the inspirational organization of the junior branch program in 1948 by Dr. Mabel Gardner. Though I shall not go into further historical details of the organization, I will speak of my part in it, which requires a pause with Branch Two of Chicago in which I was active for several years. It was not until 1947, when, as a delegate, I attended the midwinter meeting in Cincinnati, that I made my entrance into the internal affairs of the AMWA. Since then, to paraphrase Shakespeare, I have, in this period of time, taken many parts. It was then, as a novice, that I attended this meeting in Cincinnati, which, under the gracious guidance of President Mabel Gardner, celebrated the centennial of Elizabeth Blackwell's achievement as first graduate woman physician. I present, then, Dr. Gardner's stirring words: "This places on us the responsibility to exert the power we have thus gained. We should use it where it logically belongs: first, in alleviating the ills of our social life; and, secondly, in furthering the development of women in the profession." She concludes by saying, "These things are possible for us to do only if we catch the enthusiasm of co-operative work."[1] *Co-operative work*, then, was her slogan. Shall we revive and reaffirm it? Upon reflection, we realize that work is essential for any worth-while accomplishment, and co-operation of especial value to any project.

We should be grateful, then, to the pioneer women physicians for laying a good foundation for our present organization, one in which we should now be ready to surge forward into more active group participation. This participation is of especial value at this time, since the medical women of today do

*Presented at the AMWA Annual Meeting, San Francisco, June 21, 1958.

not have the same cohesive force found in the women's medical colleges of the 1860's, now extinct except for the one in Philadelphia. Furthermore, whatever values may be found in the coeducational school, the special value of women working together is not one; hence, the need for a medical women's organization. Another need, since women tend to work less in groups than do men, is education in this area. Such education may be gained by membership in this organization, which, based upon its inception, its function, and its development, provides fallow ground for group participation. To futher understand group participation, it behooves us to consider the following points: the dynamics of a group, the various types of groups, the growth and development of groups, and the especial contribution of our particular group.

Let us now examine a little the dynamics of a group. If we consider the group for the purpose of therapy, "the patients were encouraged to discuss, frankly and in detail, their emotional feelings, attitudes, and behavior. The conflicts they were aware of were explored and discussed, with interpretations being made by other members of the group, as well as by the therapist."[2] In this way, the participants are given a chance to ventilate their hostility and release frustrations in an accepting and understanding atmosphere. In such a group strong solidarity and loyalty develop, but these attitudes do not hamper friendly competition. If the competition for the attention of the therapist becomes unfriendly, these feelings can be discussed and interpreted. In this way neither the hostility nor the competition threatens to disintegrate the group. Here, too, a member might take considerable time to ventilate her own conflicts, while the others would listen with empathy or make appropriately helpful comments. Always, there is the implicit recognition that each has similar difficulties, and each, in turn, may expect understanding. Furthermore, each one in the group is encouraged by the therapist to explore her own problems. In such a therapeutic group, it is of greater importance for the therapist to be an empathic listener than a giver of advice; however, appropriately timed interpretations and correction of misinterpretations by the patients who respond in terms of their own problems are essential. Another necessary quality of the therapist is to be aware of the degree of emotional stability of each member in the group, so that an extremely disturbed patient may not be precipitated into a state of panic or a psychotic episode by the group pressure. Strong feelings of group identity and dependence upon the group are feelings to be recognized and utilized by the therapist.

These dynamics, with variations, apply to many types of therapy groups, and, although the purpose of rehabilitating the individual is the same, the composition of the group may vary to include adolescent delinquents, prison inmates, patients in mental hospitals, or those in the geriatric classification. It has been said about these "oldsters" that group therapy helps to maintain adequate mental and emotional adjustment, which are potent factors in physical health. In addition to therapy groups there are many recreational groups that aim to give their members a greater feeling of security by enlarging their social contacts and experiences. In this age of potential destruction, all of these groups—especially the youth groups, such as the Boy Scouts, the Girl Scouts, and the many under religious supervision—are important as constructive elements in society.

Although we have spoken of group therapy, it can be said that most of the previously described components are present in every group, though so modified in many groups that the comparisons may be difficult to recognize. We will speak now of a social group in a broad sense of the word, or, more specifically, a professional group. Let us, then, consider further facts about a social group. Dr. J. L. Moreno[3] in his book "Who Shall Survive?" states:

> Whenever two or more people are functioning as a social group, that group not only consists of those individuals; but more important, perhaps, if that is possible, than the individuals themselves, and without which the functioning as a social group could not be expressed, are the relations which maintain between them. It is these intangibles . . . which enable the mathematical sum of a certain number of individuals to function as a social group . . . . It might be added that it is a study of emotional relations between individuals who are functioning as a social group, or as [a study of] the cross-currents of emotions as they play back and forth between individuals . . . and that the emotional cross-currents may be thought of in terms of energy distribution. . . . It helped us in the beginning [of our study] to think, although we had no definite proof of it, that mankind is a social and organic unity. . . . If this whole of mankind is a unity, the tendencies must emerge between the different parts of this unity, drawing them, at one time, apart, and, at another time, together. These tendencies may be sometimes advantageous for the

> parts and disadvantageous for the whole, or advantageous for some parts and disadvantageous for other parts. These tendencies may become apparent on the surface in the relation of individuals or groups of individuals, as affinities or disaffinities, as attractions and repulsions. . . . The next question which, by necessity, arose was how this unity originated. A closer relationship must have existed between individuals in the earlier stages of development; in the absence of social organs, such as language, the interactions between the members of a group were physically more intimate than in levels of a later date. . . . However brilliant the spontaneous, creative ability of an individual appeared as long as he acted alone, as soon as he had to act together with a group of individuals who also had to release spontaneous expression, the product often lacked in unity and harmony. . . . In social groups, we sought a technique of freedom, a technique of balancing the spontaneous social forces with the greatest possible harmony and unity of all.

So, for our future program, the AMWA must keep its freedom of thought and action as the most precious American heritage of our liberty-seeking forefathers but, at the same time, become more group-conscious. This does not mean loss of individual identity, but acceptance of conformity to the point of working together. This new emphasis on group planning and group action is not synonymous with collectivism but will provide the needed change in mental climate from one based on individualism to one founded on co-operation.

To develop another idea, we find that Dr. Alan Gregg[4] in his recent book "For Future Doctors" has said:

> What binds our profession together throughout the world is, not so much the facts we agree upon or the knowledge we share, as the experiences we have all gone through and the way we understand them and fit them into the pattern of our values. . . . Our professional history hangs together because the cardinal experiences of the doctor with death, birth, responsibility and confidence, fear and courage, ignorance and learning, power and powerlessness, have remained so little changed through the centuries, and even through the last few decades.

It seems that these words emphasize the meaning of the core of a physician's organization; that is, all members have these common experiences with certain other human beings, their patients, in their most sensitive spots and in their times of greatest trial. In speaking of specialists Dr. Gregg quotes from Plato's "Charmides": "And this was the reason why most maladies evaded the physicians of Greece —that they neglected the whole, on which they ought to spend their pains, for if this were out of order, it was impossible for the part to be in order." This idea is basic in the Gestalt psychology, which emphasizes that the whole is more than the sum of its parts. This extra something, this unknown quality, may be interpreted as the spiritual, Perhaps, it is the spiritual element that is so keenly felt in certain small groups, for has it not been said in the Scriptures, "Where two or three are gathered together in my name, there am I in the midst of them?"[5]

To turn our attention to other types of groups, we know that any organized minority group may have more influence than a larger number of people who are unorganized. The so-called pressure groups in Congress are numerous and well known for this function. Are there values in a minority group other than pressure? Assuredly, stamina, courage, and initiative are assets for an individual in a minority group, and, for one with these qualities, living in such a group may be a maturing process. Furthermore, a group usually serves as a medium through which a message may be expressed. Therefore, with a few exceptions, such as the President of the United States or, occasionally, an evangelist of the stature of Billy Graham, the individual's voice is lost in the multitude; but, through an organization, his message may be widely disseminated.

We have spoken of therapy groups and pressure groups, and now we will discuss briefly civic and educational groups. Women's clubs throughout the country had purpose in local civic and community life but were of less importance in the educational field until they became national. Now, many of these same organizations—for instance, the American Association of University Women, the National Federation of Business and Professional Women's Clubs, and the General Federation of Women's Clubs—have become international; we, of the AMWA, are part of the Medical Women's International Association, and, in this way, we join hands with medical women in many other countries. This means that we must also assume some responsibility for their problems and offer to exchange remedies on an educational basis, as has been accomplished by the American Women's Hospitals as a medical service. The recent trend for expansion of national organizations into international ones has steadily increased until many of them in this country have now combined with those of similar interests in other countries; so the growth of such professional organizations, although not

so startlingly rapid in development as the sputniks of today, is steady and continual.

This interchange of ideas and personnel leads to better understanding among nations, and, remembering that the impossible only takes a little longer, this understanding may lead onward to the day of universal brotherhood. In this way, this organization will then take its place, not only with participating members but as a participating organization among others of its kind—for instance, the World Medical Association—and, in that way, give to all peoples its service, strength, and stability. To quote Sir Walter Scott, "The race of mankind would perish did they cease to aid each other. We cannot exist without mutual help. All, therefore, that need aid have a right to ask it from their fellowmen; and no one who has the power of granting can refuse it without guilt."[6]

If, then, the group is to play such an important role in our future destiny, can it function without a leader? The answer is obvious: A leader is of utmost importance but should be one with special qualifications, such as sensitivity to others, the ability to tap and develop the best in the various members of the group without domineering or overshadowing them, and adequate training for group leadership. Such leadership is different from that of the individualistic type, that kind of leadership in which an individual, by force of his own intelligence, drive, and personality, builds a business and dominates it in such a way that all others are subservient to him. To the so-called rugged individualists of the past era, we owe much of our business success today; but, in the past decade, there has been an emergence from this type of control to one of a more co-operative way of functioning. Even small business institutions are now compartmentalized so that heads of departments form a group to advise with the president or administrator in managing affairs. In such an organization not only more participation but more responsibility is required of the group.

It is in such a phase that I see this organization. Transitional periods are hard; but, once the transition is made, the progress is less rigorous. I, therefore, envision this organization not only functioning well, as expected of such an organization, but, by understanding the needs and requirements of a group, growing in strength so that it may be a far greater influence in the future. In this way, we can all proudly look to the AMWA as a leader amongst other groups, for, as George Santayana has said, "He who is disposed to ignore history must be prepared to repeat it."[4]

Medical visitors from foreign lands speak highly of the teamwork found in the United States and of the friendliness of the women physicians contacted. These are valuable assets and should be emphasized, as should also the following points, given us by the last three presidents of this organization in their inaugural addresses: namely, the need for physicians to know the "whole patient" in order to give adequate professional care; the importance for the physician to have his eyes on the "horizon" in order to look into the future for new resources in treatment; and the value to humanity for the physician, as a true healer, to have faith in himself, as well as in those who come to him for professional help. Shall we, then, keep our sights turned toward these long-range goals and, as participating members of this group, expect our efforts to travel far into the future? Assuredly, we can meet this challenge and, as a group, can then fulfill the purpose for which this organization was founded.

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The New York Infirmary's Polyglot Population

SAMUEL BLACKWELL, FATHER of Drs. Elizabeth and Emily Blackwell, believed that people of all nationalities, races, and colors were equal, and by his courage and beliefs set an example for his children to follow. When Elizabeth Blackwell opened her dispensary in 1854 to help the poor people in the heart of one of New York's slums, three quarters of her patients were foreign-born.

Infirmary sign in three languages.

Since then, the aim of the founders has been carried out by keeping the New York Infirmary close to a polyglot population to whose needs the staff of the hospital is ready to minister, whether on health problems, as interpreters, or as friends. The neighborhood has changed many times through the years (Irish, German, Jewish, Italian, Polish, Greek, and so on), and the patients represent a true cross section of all nationalities and religious beliefs. For example, patients discharged in 1955, not including newborn infants, had the following variety of religious beliefs:

Adventist	1
Bahai	1
Buddhist	5
Confucian	19
Ethical Culture	3
Greek Orthodox	73
Hebrew	674
Jehovah's Witness	7
None	122
Quaker	2
Protestant	970
Roman Catholic	1,524
Christian Science	1
Other	7
Total	3,409

And patients discharged in 1955, not including newborn infants, came from 36 different areas, as follows:

Africa	2
Australia	3
Austria	24
Balkan States	2
Baltic States	9
Belgium	1
British Isles	51
British West Indies	8
Canada	29
Central America	1
China	74
Cuba	13
Czechoslovakia	12
East Indies, Japan, Philippine Islands, Hawaii	6
France	20
Germany	51
Greece	8
Holland	5
Hungary	12
Ireland	29
Italy	59
Mexico	3
Middle East	9
Poland	60
Portugal	1
Puerto Rico	103
Romania	13
Russia	67
Scandinavia	16
South America	14
Spain	7
Switzerland	1
United States	2,696
Total	3,409

Patients wait for their appointment in Strang Clinic.

From the first there was always racial and religious understanding. It was believed that experience with a diversified population would be of invaluable experience to young women interns and residents, who themselves have, through the years, represented all nations. At one time most of the foreigners came from Eastern or Middle Europe, or from China. As world conditions have changed, so has the representation of the nationalities of these young physicians. For example, during the past eight years there have been on the intern and resident staff representatives of 27 locales, exclusive of those from the United States. There has been an increasing number from the Philippines as returning doctors spread reports of the excellent training and opportunities given women in this hospital.

Since 1950, 28 girls have come from the Philippines; 7 from Greece; 5 each from Germany and China; 3 each from Poland and Korea; 2 each from Austria, Chile, Estonia, Dominican Republic, England, Peru, and Switzerland; and 1 each from Bulgaria, Colombia, Formosa, French Morocco, Haiti, Honduras, Hungary, India, Iran, Israel, Japan, Yugoslavia, Romania, and West Ukraine.

The language barrier has grown less serious, and the girls have been able to enter into life here more speedily, since more of them, particularly those from the Philippines, have had better training in English before coming.

Most of the girls are shy in their new environment and it has been a fascinating study to watch their personalities develop as they come to understand our ways and language and begin to take responsibility in the same degree. As they leave they take with them knowledge and methods learned here and secure positions of honor and responsibility in hospitals and colleges all over the world, many of which they, like Elizabeth Blackwell, have been instrumental in founding.

Resident physician takes case history from patient in gynecology clinic.

The Midyear Meeting of the Board of Directors, AMWA, will be held on Nov. 13-16, 1958, at The Woodner in Washington, D. C.

Blackwell Awards of the New York Infirmary

The annual ceremony of presentation of the Elizabeth Blackwell awards took place on Jan. 19, 1958, at the New York Infirmary. The awards, established by Mrs. Frank Vanderlip, President of the hospital, in 1949, are made each year to a number of women physicians who have made significant contributions to the science, practice, or teaching of medicine.

The recipients this year are Dr. Emily Lois Van Loon of Philadelphia, in recognition of her distinguished achievement in the teaching and practice of otolaryngology; Dr. Caroline Bedell Thomas of Baltimore, in recognition of her outstanding contribution in teaching and investigation in the field of internal medicine; and Dr. Harriet G. Guild of Baltimore, in recognition of her outstanding teaching and clinical investigation in the field of pediatrics.

Preceding the ceremony a luncheon for the candidates, speakers, the Executive Committee of the Medical Board of the Infirmary, and members of the Elizabeth Blackwell Citations Committee was given by Mrs. Frank Altschul, Chairman, at the Gramercy Park Hotel.

At the ceremony Mrs. Altschul, Chairman of the Elizabeth Blackwell Citations Committee, presided. She presented the candidates to Mrs. Vanderlip and read their citations. Mrs. Vanderlip, after a few words of greeting conferred the awards. Dr. Van Loon made the acceptance speech for the candidates. The guest speaker who delivered the principal address of the occasion was the Honorable John J. McCloy, Chairman of the Board of Directors of the Chase Manhattan Bank, formerly United States High Commissioner for Germany. Following the ceremony, tea was served. There were almost 300 guests present.

Left to right: Dr. Emily Lois Van Loon, Dr. Harriet Griggs Guild, and Dr. Caroline Bedell Thomas

CITATIONS

"The New York Infirmary hereby makes this citation of DR. HARRIET GRIGGS GUILD for her distinguished achievements in pediatrics as a physician, teacher, and investigator.

"Early in her career, her scholarly attainments were recognized at Vassar by her election to Phi Beta Kappa, and at Johns Hopkins Medical School by her election to Alpha Omega Alpha.

"After completing her training, Dr. Guild joined the full-time staff of Johns Hopkins Medical School, where she is now associate professor of pediatrics; she is also pediatrician at the Harriet Lane Home of the Johns Hopkins Hospital. As a brilliant clinician and superb teacher she has had great influence on the future careers of large numbers of students, inspiring many who have gone far in pediatric research and giving to all a deep desire to attain a better understanding of children and their diseases. By her careful clinical investigations Dr. Guild has made important contributions to our knowledge of diabetes, nephrosis, and other metabolic diseases of childhood. Modest and self-effacing, there is no one at "The Hopkins" who commands greater respect from her students and her colleagues.

"The New York Infirmary is proud to confer the Elizabeth Blackwell award on Dr. Harriet Griggs Guild."

"The New York Infirmary hereby makes this citation of DR. CAROLINE BEDELL THOMAS for her contributions to fundamental and clinical research in internal medicine.

"She was honored at Smith College by election to Phi Beta Kappa, and at Johns Hopkins Medical School by election to Alpha Omega Alpha. In 1957 she received from the American College of Physicians the James D. Bruce Memorial Award in Preventive Medicine for her pioneering work in the prevention of rheumatic fever.

"Since 1945 Dr. Thomas has been visiting physician at Johns Hopkins Hospital and in 1952 was made associate professor of medicine in Johns Hopkins Medical School. Her experimental and clinical investigations have explored cardiovascular physiology, its neurogenic control, and the role of the kidney. Since 1946 she has been concerned with basic research: the factors that may be significant precursors of hypertension and coronary disease. These accomplishments are all the more remarkable in that along with them Dr. Thomas has made a career of her home. In 1935 she married a professor of medicine at Johns Hopkins, Dr. Henry Thomas, and has successfully raised three children.

"The New York Infirmary is proud to confer the Elizabeth Blackwell award on Dr. Caroline Bedell Thomas."

"The New York Infirmary hereby makes this citation of DR. EMILY LOIS VAN LOON for her outstanding work in the teaching and practice of otolaryngology.

"A native of Philadelphia, she obtained her B.A. from Swathmore, her M.D. from the Woman's Medical College of Pennsylvania, and her Master of Science in Medicine from the Graduate School of the University of Pennsylvania.

"Early in her career, Dr. Van Loon studied and worked with Dr. Chevalier Jackson, becoming proficient in the then new technique of bronchoscopy, particularly its use in children. As an outstanding expert in this procedure she has served on the staffs of a number of Philadelphia hospitals. In her operating room is a framed collection of strange objects she has retrieved from her patients's lungs and throats—a tribute to her skill and a memorial to human carelessness.

"Dr. Van Loon has been, since 1931, professor of otolaryngology and of bronchoscopy at the Woman's Medical College of Pennsylvania. She is a skillful surgeon with the traits of a great teacher; she shows sympathetic devotion to her patients, a dedicated sense of responsibility, and an inquring mind. Her keen sense of humor adds to the interest of her lectures, both professional and popular. In addition to teaching and practicing she has found time to serve her medical school in many capacities, and is now president of the staff of the College Hospital.

"The New York Infirmary is proud to confer the Elizabeth Blackwell award on Dr. Emily Lois Van Loon."

Memorial to

ELLEN CULVER POTTER (1871-1958)

ELLEN CULVER POTTER, born in New London, Conn., in 1871, daughter of Thomas W. and Ellen (Culver) Potter, of old colonial stock, died on Feb. 9, 1958, in Philadelphia at the Hospital of the Woman's Medical College of Pennsylvania. The Woman's Medical College, her alma mater, together with many other medical and social service organizations, has suffered a great loss in the passing of a woman physician dedicated to untiring service to her fellowmen. She was known in many capacities—as physician, teacher, lecturer, and administrator, and in the fields of medicine, public health, and social welfare.

Early in life her major interest was in art: She spent two years at the Academy of Arts in Boston, one year at the Art Student's League in New York City, and a number of months during the summers in Europe. The change from art to medicine (in her own words) was due to a suggestion of one of her professors of art, who said to his class: "'You can never be a good artist unless you know how the other half lives! Go down to New York and live in the College Settlement!' So I went." Frequently on visits to the tenement dwellers she was asked for medical advice; this resulted in her decision to study medicine. She entered the Woman's Medical College of Pennsylvania and graduated in 1903.

She interned at the Woman's Hospital of Philadelphia and was the first resident physician at the Hospital of the Woman's Medical College in 1904. After completion of her residency in 1905 she began private practice in Germantown. Her emphasis in general practice, however, was on gynecology and obstetrics. During the years of active medical practice she had staff affiliations at the following hospitals: Philadelphia General, Germantown, Howard, Woman's, and Woman's Medical College of Pennsylvania. Her interest in medical-social welfare began early in her career, and in 1918 she became special lecturer in social hygiene at Bryn Mawr College. She was a member of the staff of the Bureau of Municipal Research, Philadelphia, in 1918. She was director of the Hospital of the Woman's Medical College in 1919-1920 and special lecturer and supervisor of social hygiene, State of Pennsylvania, in 1920. Her interest in helping the other half live now became the dominant factor in her medical life, and she was appointed chief of the Division of Child Health, Department of Health, Pennsylvania, in 1921. In 1923 she was appointed Secretary of Welfare, State of Pennsylvania, by Governor Pinchot. Thus, she was the first woman to hold a position of cabinet officer in any state cabinet in the United States. Governor Pinchot once called her "the best man in my cabinet." Her portrait hangs in the capital building in Harrisburg.

During 1930 to 1935 she was a consultant to the Children's Bureau. In 1927 she was appointed director of medicine, Department of Institutions and Agencies of the State of New Jersey. She was then appointed to the Hoover Commission on Unemployment; to the Wickersham Commission and Woman's Prisons and Parole; to the Technical Committee of the President's Commission on Social Security; and to the Federal Emergency Relief Administration, as director of policy in relation to transients.

Dr. Potter held prominent offices in the following medical and social welfare organizations: president, American Medical Woman's Association, 1927-1928; president of board, Woman's Medical College of Pennsylvania, 1941-1943; president, New Jersey State Conference of Social Work, 1940-1945; and president, National Conference on Social Work, 1945-1946. Many honors were bestowed on her. She was elected Woman of the Year by the New Jersey Branch of AMWA in 1953; given the W. S. Terry, Jr. Merit award in 1948; and given the Elizabeth Blackwell award in 1954. She received the honorary degree of LL.D. from Rutgers University in 1936 and the degree of D.S.Sc. from Woman's Medical College of Pennsylvania in 1950.

She was a fellow of the American College of Physicians, American Public Health Association, and American Medical Association; an honorary member of the American Psychiartic Association; member of the American Medical Women's Association, the Board

of Corporators, Woman's Medical College of Pennsylvania, the American Public Welfare Association, the New Jersey State Safety Council, and the Advisory Council to the Division of Chronic Disease Prevention, New Jersey State Health Department; and member and chairman of the International Commission on Chronic Illness for several years.

Ellen Potter contributed many articles to numerous journals in the medical and social fields. In these she presented advanced ideas of social welfare and preventive medicine, which have in recent years been instituted.

Those who worked with Ellen Potter recognized her wide vision and advanced ideas of medical care for the many, as well as her interest in prevention of all forms of disease.

She had a great capacity for work and a determination to search for details and cause and effect in dealing with medical-social problems. Her thinking was unusually clear, and, in conference, after much discussion, she frequently gave the final form to the conclusions reached by an entire group. She had a keen sense of humor and a willingness to see both sides of a question. Although she was an excellent teacher, she was most successful as an administrator. She combined a wide vision of needs in the medical-social fields, with the ability to execute the visioned plan.

—Frieda Baumann, M.D.
Editor

Facts About Hospitals

During the last two decades the proportion of the American population admitted to hospitals has more than doubled, Health Information Foundation reports. But the average length of stay per person has declined by almost half—from 41.1 days per person in 1935 to 22.4 days in 1956.

Utilization of general hospitals has increased more sharply recently than use of mental and tuberculosis hospitals. Even so, the country's psychiatric hospitals still account for more than half of all patient-days.

Men require more hospital treatment than women, even though women's admission rates are much higher during the childbearing years.

Rural residents are admitted to hospitals more often than urban residents; but, city dwellers, once admitted to hospitals, generally require a longer stay.

Bibliography of Medical Reviews

In June, 1958, the third annual volume of "Bibliography of Medical Reviews" was published. Review articles listed in volumes 1 and 2 were gathered as a by-product of the "Current List of Medical Literature" operation and were duplicated in the parent publication in another format. With volume 3, however, the collection of review articles was extended to all of the current journals received by the National Library of Medicine. The result has been the inclusion in volume 3 of approximately 600 non-"Current List" articles along with the 2,300 review articles also listed in the "Current List."

The 1958 volume of the "Bibliography of Medical Reviews" is arranged by subject with a separate author index and will contain approximately 2,900 references to review articles in clinical and experimental medicine and allied fields which have appeared largely in 1957. Copies of volume 3 for 1958 will be available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., at a price presently estimated at $1.25.

Of Special Interest

FELLOWSHIPS IN PSYCHIATRY

The American Psychiatric Association has received a grant of $100,000 from Smith, Kline and French Foundation to continue the Foundation's Fellowships in Psychiatry through 1960. The fellowships originated in 1955 and are administered by a committee appointed by the American Psychiatric Association. More than 150 physicians and medical students have benefited from these awards. The programs have ranged from a study of suicide rates to extension training programs in psychotherapy and psychosomatic medicine.

Staff psychiatrists from state hospitals have been enabled to take advanced training at some of the nation's leading psychiatric training centers. Other physicians, many in state mental hospital service, participated in extension training programs. Visiting lectureships and teaching fellowships were established at five mental hospitals. The financial opportunity also has been provided for more than 50 medical students who undertake summer programs to enrich their undergraduate psychiatric studies. A number of these students have indicated their intention to specialize in psychiatry.

These fellowships have three basic objectives: first, that it is essential to bring new knowledge of therapies, techniques, and practices to bear on the treatment and care of patients in mental hospitals and schools for the retarded; second, that the recruitment of a vast new corps of psychiatrists is direly needed; and, third, that it is important to broaden the skills of physicians in nonpsychiatric practice to enable them to handle the emotional problems of their patients.

Dr. Daniel Blain, Medical Director of the American Psychiatric Association, has said that at the current rate it will take upwards of 20 years before the United States produces the psychiatrists the nation needs in 1958. A greater shortage exists in state mental hospitals, which, on the basis of current minimum APA standards, have only 45 per cent of the physicians needed.

Seven main types of fellowships are available: (1) support for advanced training of full-time staff psychiatrists of public mental hospitals and schools for the retarded; (2) awards to hospitals for visiting lectureships and for teaching fellowships; (3) support to medical schools and teaching centers for extension training programs; (4) student fellowships to encourage talented medical students to broaden their experience in psychiatric approaches and practice; (5) medical fellowships to encourage broadened skills in handling of psychiatric problems by physicians other than psychiatrists; (6) foreign scholar lectureships to bring outstanding men to the United States; and (7) residency training fellowships under unusual circumstances.

Members of the committee are Drs. Kenneth E. Appel, Philadelphia, Chairman; Daniel Blain, Washington, D.C.; Henry Brill, Albany, N.Y.; Jacob E. Finesinger, Baltimore; Francis J. Gerty, Chicago; Robert G. Heath, New Orleans; David A. Young, Raleigh, N.C., and Seymour Vestermark, Bethesda, Md.

Applications for fellowships are considered in May and October and must be received by April 1 and Sept. 15. Information and application forms may be obtained from the committee, Box 7929, Philadelphia.

LAW-MEDICINE RESEARCH

Over 70 per cent of all litigation in courts involve substantial or controlling issues dependent upon medical proof. Government programs involving innumerable legal considerations are becoming more and more significant in medical practice, public health, and medical care programs. Advances in medical science, particularly in psychiatry and other behavioral sciences, are having a great effect on the traditional rules of criminal responsibility, civil competency, and other fields of law. Also, many medical scientists are concerned about growing governmental and other legal restrictions in various areas of medical scientific work, such as procurement of anatomic specimens, experimental animals, and tissue transplantation. The field of law-medicine research is new and underdeveloped, and basic research is one of its greatest needs. These reasons were cited by President Harold

C. Case of Boston University as indication of need for a program of research and training in the interdisciplinary areas of law, medicine, and the behavorial sciences. A Law-Medicine Research Institute, the first of its kind in the United States, has been established at Boston University. The Institute will conduct courses in medicolegal areas and will regularly sponsor a lecture series for the practicing members of the profession.

EMOTIONAL HEALTH IN INDUSTRY

The Thirteenth National Industrial Health Conference, which met in Atlantic City, April 19-25, was attended by over 3,000 occupational health specialists, businessmen, and labor leaders. A total of 134 papers was presented on topics related to radiation, mental health in industry, air pollution, noise, medical care and in-plant health service, industrial dentistry, and industrial nursing.

The section on Mental Health in Industry reported that studies have shown that as much as one third of sickness absenteeism in industry is due to mental health problems. A symposium centered discussion on the early recognition of emotional problems by industrial physicians.

MEDICAL CIVIL DEFENSE EMBLEM

The Government of the Principality of Liechtenstein has been the first to ratify the protective emblem for civilian physicians, medical personnel, and medical care establishments, approved by the Tenth General Assembly of The World Medical Association. The Liechtenstein Medical Association approved the emblem and secured recognition and jurisdiction from its government. The decree recognizing the status of the protective emblem was signed by Dr. Alexander Frick, Chief of Government. A number of the 53 member associations of The World Medical Association have approved the emblem and Regulations During Armed Conflict and submitted these to their governments for legislative action in order to ensure recognition and jurisdiction.

Representatives of The World Medical Association worked with the International Committee of the Red Cross, the International Committee on Military Medicine and Pharmacy, and the World Health Organization as observers in preparing the design and establishing the code of regulations governing the care of the sick and wounded in time of armed conflict.

The design of the protective emblem is a straight stick and a snake, represented by a sinuous line over the stick with two undulations on the left side and one undulation on the right side in red displayed on a white field. The need for such an emblem arose when it was fully realized that civilian physicians, their assistants, and medical care establishments were not protected by the Red Cross through the Geneva Convention of 1949.

BOOKLETS PREPARE FOR CHILD'S HOSPITAL EXPERIENCE

The Children's Hospital of Columbus, Ohio, has available a set of companion booklets that attempt to solve the problem of how to prepare both the patient and the parents for a child's hospital experience. One is a 32-page picture book telling the child's story in the words and through the eyes of a child; the other is a comprehensive 16-page manual telling parents exactly what they can and should do to help their child most.

The latter emphasizes that the parents themselves are on the "healing team." The first part of the booklet deals with What You Should Know and covers What You Can Do, Now, What to Bring, How We Admit Your Child, Then to Bed, And So, Until Tomorrow, When You Come Back, Our Accommodations and Services, and Time To Go Home. The rest of the booklet covers finances, information about the child's progress, something about the operation of the hospital and its personnel, and a form for the parents to assess the hospital service. The booklet is illustrated with pictures and drawings.

The picture book is titled "The Time Dede Went to the Hospital" and is designed for boys and girls from 3 to 10 years. The text is simply prepared so that even "preschoolers" will understand when it is read to them. The story is told by Dede, a 6 year old, on the theory that children pay more attention to other children's stories than to those told by adults. It is beautifully illustrated with natural light photographs. Dede in real life is Donise Ann Martin, the daughter of Mr. and Mrs. Tom Martin of Dayton, Ohio. The booklet is given to each child and becomes a personal record of the hospital experience. The last page is for autographs of "My New Friends."

News of Branches

Branch Four, New Jersey, met for a luncheon meeting on March 26 at the Medical Society Building in Trenton. The program that followed a short business meeting was the discussion by Branch Four members of the tape recording of the panel on "Emotional Health of the Family," presented at the AMWA 1957 Annual Meeting. Dr. Laura Morrow of Passaic, psychiatrist, commented on Dr. Blandina Worcester's discussion of "Parent-Child Relations as Seen Through the Eyes of a Pediatrician." Dr. Elisabeth Ward, endocrine gynecologist of Newark, discussed points made in Dr. Sophia Kleegman's paper on "Preparation for Marriage and Marriage Counseling."

Dr. Rita Finkler led discussion on "The Handling of Congenital Anomalies."

On Jan. 15 Dr. Lydia Hauck of Irvington was honored as Medical Woman of the Year (1958) at a dinner given by Branch Four. Dr. Sylvia Becker, President of the Branch, presided. Dr. Carye-Belle Henley was in charge of arrangements for the meeting. Dr. Hauck is a graduate of Woman's Medical College of Pennsylvania. Her medical school days were presented through amusing and human interest stories by three of her classmates, Dr. Ella Coughlan, Dr. Rita Finkler, and Dr. Eva Brodkin. Dr. Brodkin told of Dr. Hauck's unselfish and untiring efforts in philanthropic work, as well as her aid and encouragement to women in medicine.

As part of the dinner ceremony a gaily decorated cake was placed before Dr. Hauck. On being presented the Medical Woman of the Year plaque by Dr. Coughlan, Dr. Hauck said that she would "pass on the favor by encouraging young girls to enter our wonderful profession."

Dr. Louella Watkins, a dentist, and daughter of Dr. Hauck, was present for the ceremony.

Members of Branch Thirty-Three, Miami, Florida, were the hosts at a buffet supper in the home of Dr. Jean Jones Purdue, Miami Beach, on April 13, given in honor of the senior women medical students and the physicians of the Latin American countries and the United States who attended the VI Congress of the Pan American Medical Women's Alliance. A short business meeting followed at which officers were elected and discussion was held of how the Branch could implement the program and objectives of the Association. Additional areas of interest, such as meetings or programs related to the management of business, and legal matters of personal nature such as settling estates, were discussed. Lillian Majally, Executive Secretary, attended this meeting as part of a field visit to the Southeastern states.

Branch Thirty-One, Mississippi, met on April 9, to reactivate the membership and program. The Branch had become inactive, and at the invitation of Dr. Helen Cannon-Bernfield, Regional Director of the Southeast Central Region, the physicians of the Jackson area met with the Executive Secretary, Lillian Majally, for a re-evaluation of the AMWA and the need for active branch participation in the program and activities of the Association. Dr. Blanche Lockard was elected president, and Dr. Gussie R. Higgins-Carr was named membership chairman. Seven women medical students were present, and they requested and received approval to become the junior section of the active Branch. A second meeting was held on May 15. There are 42 women physicians in the State, and 10 specialties plus general practice are represented.

Dr. Mary B. H. Michal, Regional Director of the South Atlantic Region, and the members of Branch Thirty-Two, Western North Carolina, were hostesses at a breakfast on May 6 to the women physicians attending the One Hundred Fourth Annual Session of the Medical Society of the State of North Carolina. Lillian Majally, Executive Secretary, was guest speaker for the breakfast.

While in Asheville, Mrs. Majally was also guest speaker at the Installation of Officers Tea for the Asheville Business and Professional Women's Club. The programs of AMWA for the past four years were described. Great enthusiasm was aroused for assistance with BPW programs in the same areas. Assistance of this nature carries out the objective of the Association "to encourage social and co-operative relations within and without the profession."

Opportunities for Women in Medicine

COURSES

Gastroenterology. The American College of Gastroenterology will give its annual course in postgraduate gastroenterology at the Jung Hotel, New Orleans, Oct. 23-25. For information and enrollment write to the American College of Gastroenterology, 33 W. 60th St., New York City 23.

Postgraduate Medical Seminar-Cruises. Ohio State University College of Medicine is sponsoring a 15 day West Indies-South American cruise, sailing on Nov. 11 from Wilmington, N.C., and visiting Havana, San Blas Islands, Cristobal, Curacao, La Guaira, St. Thomas, and San Juan. The medical seminar constitutes 30 hours of acceptable Category 1 Postgraduate Requirements (A.A.G.P.).

The Kentucky Academy of General Practice, with faculty members from the University of Louisville School of Medicine, is sponsoring a 10 day West Indies cruise, sailing on Nov. 28 from Wilmington, N.C., and visiting San Juan, St. Thomas, Cuidad Trujillo, and Nassau. The medical seminar constitutes 20 hours of acceptable Category 1 Postgraduate Requirements (A.A.G.P.).

The Albany Medical College of Union University is sponsoring a 16 day Caribbean-Panama cruise, sailing from New York on Jan. 7, 1959, and visiting Nassau, Havana, San Blas Islands, Cristobal, Cartagena, San Juan, and Cuidad Trujillo. The seminar constitutes 22 hours of acceptable Category 1 Postgraduate Requirements (A.A.G.P.).

Duke University School of Medicine is sponsoring its Fourth Seminar cruise, sailing from New York on Jan. 14, 1959, for a 24 day European cruise. Visits will be made to Tangier, Gibraltar, Palma, Palermo, Naples, Rome, Florence, the Italian Riviera, and Nice. The medical seminar constitutes 30 hours of acceptable Category 1 Postgraduate Requirements (A.A.G.P.).

For literature on these four cruises write to Allen Travel Service, Inc., 565 Fifth Ave., New York City 17.

Training for Orthopedic and Prosthetic Technicians. The Institute for the Crippled and Disabled, the Presbyterian Hospital in New York City, and Columbia University are offering two nine-month training courses starting Sept. 8, 1958. Candidates will be accepted from all parts of the world in an effort to meet the international shortage of qualified brace-making and limb-making technicians. A brochure and application may be obtained from Charles R. Goldstine, Institute for the Crippled and Disabled, 23rd Street at First Avenue, New York City 10. Applications received prior to Aug. 1 will be given preference for enrollment.

FELLOWSHIPS

American Psychiatric Association. Four types of fellowships for individuals have been made available: (1) support for advanced training of full-time staff psychiatrists of public mental hospitals and schools for the retarded; (2) student fellowships to encourage talented medical students to broaden their psychiatric approaches and practice; (3) medical fellowships to encourage broadened skills in the handling of psychiatric problems by physicians other than psychiatrists; and (4) residency training fellowships under outstanding circumstances (see page 298 of this issue). Applications for October consideration must be received by Sept. 15. Information and applications may be obtained from the American Psychiatric Association, Smith, Kline and French Foundation's Fellowship Committee, Box 7929, Philadelphia.

MEETINGS

Public Health. The American Public Health Association will hold its 86th Annual Meeting in St. Louis, Oct. 27-31, 1958. The program will include 14 specialized sections and is expected to attract more than 4,000 health specialists. Further information is available from the American Public Health Association, 1790 Broadway, New York City 19.

News of Women in Medicine

Dr. Caroline H. Callison of Centreville, Dr. Sarah M. Peyton of Crisfield, and Dr. Alice Tobler-Lennhoff of Baltimore have been appointed members of the Committee on Diabetes of the Medical and Chirurgical Faculty of Maryland, and Dr. Isabel H. McClinton of Kingsville has been appointed as a member of their Geriatrics Committee.

Dr. Vernelle Fox, Medical Director, Georgian Clinic, Atlanta, Ga., presented a paper on "Religious Therapy in an Alcoholic Clinic" at the Fourteenth Annual Meeting of the National Council on Alcoholism, held in New York, March 26-28. Dr. Fox is the immediate past-president of Branch Twenty-Nine, Atlanta.

Dr. Mary W. Harris was presented with an honorary life membership on the Medical Staff of Ross (California) General Hospital on April 1, 1958, in recognition of her more than 20 years of service to the hospital as house physician. She was honored by 80 staff physicians and fellow members of the Business and Professional Women's Club. Dr. Charna Perry of Sausalito, former Corresponding Secretary of AMWA, participated in the presentation ceremony.

Dr. Mary E. Johnson, Tazewell, Va., was elected to serve a two year term as director of the American Academy of General Practice at the Tenth Annual Assembly of the Academy, held in Dallas recently.

Dr. Virginia Hamilton Maley, Cartersville, Ga., spoke to members of the Cartersville Rotary Club on the subject of cancer. The film, "The Warning Shadow," was used to illustrate her lecture.

Dr. Mary B. H. Michal of Boone, N.C., AMWA Regional Director, was honored on Doctor's Day, March 30, by the city government of West Jefferson, for rendering outstanding service in the field of public health in the tricounty area of Ashe, Alleghany, and Watauga.

Dr. Catherine A. Neill, Assistant Professor of Pediatrics at Johns Hopkins School of Medicine, participated in the annual cardiovascular seminar sponsored by the Mississippi Heart Association and the University of Mississippi School of Medicine, held at the University Medical Center in Jackson April 2-4.

Dr. Helen Wallace Oglesby and Dr. B. Jeanne Endres-Burdette, of Honolulu, were elected president and secretary-treasurer, respectively, of the Hawaiian Society of Anesthesiologists.

Dr. Marion P. Primomo of Dilley, Texas, was elected secretary-treasurer of the Medical Society of LaSalle-Frio-Dimmitt Counties; Dr. Marie D. Gordon of San Antonio, Texas, was elected secretary of Bexar County Medical Society; and Dr. Mary Witt Hughes of Texarkana, Texas, was elected secretary-treasurer of Bowie County Medical Society.

Dr. Sara Rosekrans, Neilsville, Wis., served as chairman of Standing Committees for the VI Congress of the Pan American Medical Women's Alliance, held in Miami, Fla., April 13-17, 1958. Others from the United States who served in official capacities were: Dr. Jessie Laird Brodie of Portland, Ore., who served as chairman of the Nominating Committee; Dr. Elizabeth Mason-Hohl of Hollywood, Calif., who served as chairman of the Committee on Constitution and By-Laws; and Dr. Harriet Hosmer of Buffalo, N.Y., who was a member of the same committee. The Fellowships and Loans Committee was composed of Dr. Brodie, Chairman, Dr. Ruth Bakwin of New York City, and Dr. Marion Hochalter of Logansport, Ind. Dr. Hilda Habenicht of Jackson, Mich., was chairman of the General Finance Committee. Dr. Ethyl John Wood of N. Hollywood, Calif.; Dr. Eva G. Cutright of Wooster, Ohio; and Dr. Alethea Dollinger of Alhambra, Calif., served on the Program Committee (Dr. Wood was chairman). Dr. Hilla Sheriff of Columbia, S.C., was chairman of General Publicity, and Dr. Alma Trappolini and Dr. Jean Jones Perdue, members of Branch Thirty-Three, AMWA, were members of the Local Arrangements Committee. Dr. Aurora F. Alberti of Branch One, AMWA, was chairman of Arrangements and Program for the Washington, D.C., visit that followed the meeting in Miami.

Women physicians of the United States

participated in the scientific sessions of the Pan American Medical Women's Alliance: Dr. Nila Kirkpatrick Covalt, Medical Director and Administrator of Kirkpatrick Memorial Institute, Winter Park, Fla., illustrated with slides her talk on "Functions and Opportunities of the Rehabilitation Centers." Those participating in the Session on Obstetrics and Gynecology were: Dr. Addie M. Schwittay of Jackson, Mich., who spoke on "Psychosomatic Aspects of Gynecology"; Dr. Eleanor Scott of Baltimore, who spoke on "The Problem of Post Maturity"; Dr. Mary M. Spears of Philadelphia, who spoke on "Proctologic Complications of Pregnancy"; and Dr. Mason-Hohl, who served as moderator for the session. Dr. Jean Jones Perdue served as moderator for the Session on Internal Medicine and presented a paper on "The Stroke Patient: Diagnosis and Handling." Others participating in this session were: Dr. Habenicht, who spoke on "Complications of Asian Flu," and Dr. Lila Bonner Miller of Atlanta, Ga., who spoke on "The Internist Looks at Alcoholism." Dr. Mason-Hohl, Dr. Rosekrans, and Dr. Dollinger reported on the World Medical Congress held in Istanbul, in October, 1957. Dr. Eva F. Dodge of Little Rock, Ark., presided at the Session on Pediatrics. Those participating were: Dr. Bakwin, who presented and discussed her film, "Schizophrenia in Childhood"; and Dr. Cornelia Morse Carithers of Jacksonville, Fla., who spoke on "Children—Their Pets and Diseases." The session on Public Health included Dr. Dollinger, who served as moderator; Dr. Sheriff, who spoke on "Newer Trends in Maternal and Child Health"; and Dr. Ruth Howard of Denver, who presented a film and discussed "Child Services—Work Among the Migrants."

At the same meeting Dr. Esther Pohl Lovejoy and Mrs. Dwight D. Eisenhower were made honorary members of the Pan American Medical Women's Alliance.

Dr. Marie Pichel Warner of New York City spoke to the Mr. and Mrs. Club at Inwood Hebrew Center on "Health Aspects of Sex in Marriage," at the January meeting of the group.

Dr. Dorothy Wyvell, of Midland, Texas, was appointed to the Committee on Mental Health of the Texas Medical Association, and Dr. May Owen of Fort Worth, Texas, was appointed to the Committee on Scientific Exhibits. Both terms will expire in 1962.

THESE WERE THE FIRST

Dr. Ruth Gertrude Aleman of New Orleans was graduated from the University of Virginia in 1924, and previously from the Hotel Dieu School of Nursing in New Orleans in 1915. Dr. Aleman was medical director of St. Vincent's Infants' Asylum, former president of the Louisiana State Pediatric Society, honorary life member of the Hotel Dieu Nurses' Alumnae (1956), and the first woman physician to be chief of the staff of Hotel Dieu Hospital. Dr. Aleman, a pediatrician, is a member of the faculty of Louisiana State University School of Medicine.

Dr. Irene Frances Laub of Eaton, Pa., a graduate of the University of Pennsylvania in 1923, was the first woman president of the Northampton County Society (Pennsylvania), and for many years was on the active staff of the Eaton Hospital.

Dr. Mary Richardson, a graduate of the Columbia Medical School College of Physicians and Surgeons in 1929, and also of the London School of Tropical Medicine and Hygiene in 1931, was a major of the Salvation Army. With her husband, also a physician and major, she went to Travancore, India, and in Madras directed a hospital and leprosarium. Before her departure to the East, Major Richardson was resident of the Booth Memorial Home and Hospital, New York City. Later she and her husband served in Yong Dong, Korea.

Dr. Adelaide Mary Zoeller of New Orleans was graduated from the Tulane School of Medicine in 1926, and was the first woman intern at the Baptist Hospital in New Orleans. She married Dr. W. L. McNamara of Chicago.

Dr. Selma Weiss, born in Bucharest, Romania, in 1894, was graduated from the New York Medical College and Flower Hospital in 1919, and was the first woman on the staff of the Newark City Hospital, New Jersey (1919-1921).

—From the Elizabeth Bass Collection,
Rudolph Matas Medical Library,
Tulane University, New Orleans.

ALBUM OF WOMEN IN MEDICINE

MARY E. CHILDS MacGREGOR, M.D.

1896-1955

"Where there is love of man there is also love of art. . . ." Throughout her all too brief life Dr. Mary E. Childs MacGregor embodied the spirit of this precept of medical student days. Among her little, nameless, unremembered acts of kindness were her regular gifts of flowers to the children's ward and resident's quarters at the New York Infirmary. While she lived in New Jersey, she acted as foster mother for babies considered for adoption. She continued her interest in children and education as president of the Board of Trustees of the Chatham Library. In addition, she was school physician for the Chatham public schools for many years. In regard to medical education she stimulated the founding of, and contributed to, fellowships for further study by women in the field of urology. The work of the church, and especially of the medical missions, was one of her basic interests.

Dr. MacGregor was a pioneer in her field of medicine, being one of the few women to be trained in, and to practice, urology. She helped to found and build the urology service of the New York Infirmary.

Dr. MacGregor was born in East Orange, N. J., on Feb. 12, 1896, the daughter of Samuel S. Childs and Anna Emma Alward Childs. In 1917 she received her bachelor's degree from Wellesley. She entered Cornell Medical College and, after graduation in 1922, interned at the New York Infirmary. She was married to Lawrence MacGregor, and is survived by him and their two children, Samuel and Lois.

Among the important positions held by Dr. MacGregor were: chief of urology, New York Infirmary; assistant surgeon to outpatients—urology, New York Hospital; courtesy staff, Overlook Hospital, Summit, N. J., and courtesy staff, Memorial Hospital, Morristown, N. Y.

To her untimely death on Oct. 22, 1955, this active humanitarian continued her work—beloved by her colleagues, respected by her patients, revered by all who knew her—a true and dedicated physician.

—Elisabeth P. Pickett, M.D.

Book Notices

Editor's Note: These reviews represent the individual opinions of the reviewers and not necessarily those of the members of the Editorial Board of the JOURNAL.

CLINICAL USE OF RADIOISOTOPES. By William H. Beierwaltes, M.D., Associate Professor of Internal Medicine and Coordinator, Clinical Radioisotope Unit, University Hospital, Ann Arbor, Mich.; Philip C. Johnson, M.D., Assistant Professor of Internal Medicine and Chief, Radioisotope Unit, Veterans Administration Hospital, University of Oklahoma Medical School, Oklahoma City; and Arthur J. Solari, B.X., M.S. (Physics). Pp. 456, illustrated. Price $11.50. W. B. Saunders Company, Philadelphia and London, 1957.

This well-written book gives a comprehensive review of the clinical use of radioisotopes in hospital practice. Both the physician and the allied medical personnel will find it a source of information for daily use. Material is presented discussing the routine and highly specialized radioisotope procedures.

Some fundamentals about radioactivity are explained. The methods to be used for those qualified in obtaining a license for the use of radioisotopes are presented, and the necessary requirements are listed. Training courses and the places where they are given also are listed.

There is discussion of the use of radioactive iodine for tracer study of the thyroid gland in treatment of hyperthyroidism, angina pectoris, and carcinoma of the thyroid, and the use of radioactive iodinated albumin for measuring blood volumes is explained. The authors also present its application in diagnosis of brain tumors, angiocardiographic study, and in peripheral vascular disease.

The use of radioactive phosphorus (P^{32}) in localization of brain and eye tumors is given, and its use in treatment of polycythemia vera and leukemia is elaborated upon. There are chapters on radioactive gold (Au^{198}), radioactive chromium (Cr^{51}), cobalt (Co^{60}), and iron (Fe^{55} and Fe^{59}) and discussion of the less commonly used radioisotopes: arsenic, bromine, calcium, carbon, lead, and zinc.

There is a chapter on the biological effects of radiation, followed by discussion of health physics in the clinical use of radioisotopes. A chapter on instrumentation and a list of the equipment necessary for doing the examination and in giving treatment with radioisotopes are helpful. This book is recommended for the radioisotope department of a hospital and for the physician who uses this modality.

—Edward I. Siegal, M.D.

SIGNS AND SYMPTOMS: APPLIED PATHOLOGIC PHYSIOLOGY AND CLINICAL INTERPRETATION. Edited by Syril Mitchell MacBride, A.B., M.D., F.A.C.P., Associate Professor of Clinical Medicine, Washington University School of Medicine, St. Louis. Contributors: Benjamin Alexander, M.D., and others. Third Edition, Pp. 973, with 191 illustrations and 6 color plates. Price $12.00 (cloth). J. B. Lippincott Company, Philadelphia, 1957.

The new third edition of this useful book has been thoroughly revised, brought up to date, and augmented by three new chapters.

The introductory chapter, written by the editor, stresses the importance of careful and accurate history taking, its proper analysis, and interpretation, which, without any other diagnostic means, will lead the examiner in the right direction. In subsequent chapters, headache, jaundice, dyspnea, cyanosis, cough, fever, edema, and other subjects are discussed. Each sign and symptom is clearly defined and its mechanism on the basis of anatomy, physiology, chemistry, pathology, and psychology is explained. Diseases and disorders in which they appear are listed, and points of differential diagnosis are emphasized. Each section is briefly summarized and followed by a list of references. The chapter on Growth and Sexual Development is new. It contains a great deal of interesting material and furnishes the physician with important data that are readily available in the text and tables and charts. The new and extensive section on Lymphadenopathy and Disorders of the Lymphatic System supplies clear and understandable information on the anatomy, physiology, pathology, function, and structure of this important system. Several chapters were written by the editor and others were written by different authorities closely identified with the particular subject, but there is remarkable uniformity all through the book. Many clear illustrations, including color plates, graphs and photographs, add to the excellent text. A complete index is available for ready reference. This volume is a valuable aid to every practicing physician in his search for proper diagnosis.

—Edith Gutman, M.D.

THE RIDDLE OF STUTTERING. By C. S. Bluemel, M.D., F.A.C.P. Pp. 142, Price $3.50 (cloth). The Interstate Printers and Publishers, Inc., Danville, Ill., 1957.

In his most recent book Dr. Bluemel uses considerable space for the clarification of the terms stuttering and stammering. He defines stuttering as the nonfluency of prespeech or speech in the making, while "stammering" is used for the well-known pathological

manifestations of speech blocks, spasms, and muscular efforts to get "difficult" words out. "Stuttering" is applied to unorganized speech and "stammering" to disorganized speech.

Primary stammering, or the initial disorganization of speech, is followed by a secondary phase called the effort phase. The stammerer is already negatively conditioned to speech and speech situations. Thus he aggravates the symptom until he turns into a "confirmed" stammerer whose life is pervaded with phobia and anxiety. Dr. Bluemel goes on to say that stress situations in the child's environment are the major causative factors in turning stuttering into stammering.

According to the author the stammerer can be helped best by a broader therapeutic approach, which includes full awareness of the patient's emotional needs and restores his nonfluent speech into fluent verbal patterns. To effect this fluency Dr. Bluemel suggests "inward speech." The patient has to think out correct verbal patterns until the words "say themselves" through the motor speech musculature. In other words, a re-enforced sensory speaking experience facilitates the motor process of speaking.

Dr. Bluemel adds that stammerers are susceptible to psychotherapy.

It seems to this reviewer that Dr. Bluemel subordinates the constitutional language factors as causes for stuttering to the emotional ones. Furthermore, according to the author's own definition the title "The Riddle of Stuttering" may be misleading as he prefers the term "stammering" for the pathological manifestations of speech blocks, spasms, and muscle efforts.

Every worker in the field of speech therapy will consider as a definite contribution Dr. Bluemel's description of "inward speech" as a therapeutic tool for stuttering.

—*Regine F. Wohlmann,*
Language Diagnostician,
New York Infirmary

SCOVILLE'S—THE ART OF COMPOUNDING. Edited by Glenn L. Jenkins, Ph.D., Dean and Professor of Pharmacological Chemistry, Purdue University School of Pharmacy; Don E. Francke, D.Sc., Chief Pharmacist, University Hospital, University of Michigan; Edward A. Brecht, Ph.D., Dean and Professor of Pharmacy, University of North Carolina, School of Pharmacy; and Glen S. Sperandio, Ph.D., Assistant Professor of Pharmacy, Purdue University School of Pharmacy. Ninth Edition. Pp. 551, with illustrations. Price $11.00. The Blakiston Division, McGraw-Hill Book Company, Inc., New York, 1957.

In this volume all the chemical and physical potentialities involved in integrating certain medicinal substances are taken into account. The text has been so constructed as to give any student of pharmacy a precise initiation into the multiple ways in which various types of prescriptions can be compounded, with due respect for esthetic as well as ethical standards. Study and absorption of its contents are a must for all those engaged in any phase of the pharmaceutical organization: in preparation, packaging, storing, or any other manipulations required to maintain the optimal medicinal value of chemicals.

The book, divided into several main parts, touches comprehensively on the prescription itself; nomenclature and vocabulary; pills, tablets, and similar preparations; percentage, saturated, isotonic, parenteral, ophthalmic, allergenic, and other solutions; ointments; suppositories; miscellaneous external preparations; sterilization; and homeopathic pharmacy. Closing chapters take up incompatibilities of all kinds and prescriptions for criticism and practice.

This volume should be consulted freely as a reference by practicing pharmacists as well as by students of pharmacy, remembering that he is best educated who knows where and how to find information when he wants it.

—*Judith Cohen, B.S., R.P.*

OCULAR SURGERY. By H. Arruga, M.D., Director, Institute for Ophthalmology, Barcelona. Translated from the Fourth Spanish Edition by Michael J. Hogan, M.D., Clinical Professor of Ophthalmology, University of California School of Medicine, and Luis E. Chaparro, M.D., Former Professor of Physiology, University of El Salvador Medical School. Pp. 948, with 1,309 illustrations (123 in color). Price $48.00. The Blakiston Division, McGraw-Hill Book Company, New York, 1956.

A volume of ophthalmic surgery of international repute, including all the tried and tested surgical procedures of many lands, with adequate description and illustration, would be most delightful to discover; such is this second edition of Arruga's "Ocular Surgery," a book containing the most lucid and accurate illustrations of any text of its type, ones that simplify even the most arduous and difficult surgical procedures.

The book is a complete and well-organized text encompassing a consideration both of the techniques of Arruga and those of other surgeons which have withstood the most grueling test of time. The volume is clearly and succinctly illustrated in extra-large size halftones, with only the most important original references. In an intricate specialty, these magnificent drawings have no parallel for simplicity and accuracy. The compendium of surgical operations is complete.

The present work, while translated in this country, was printed abroad; the translation from Spanish to English leaves nothing to be desired, but the type used is below the standards of American publishers and there are frequent broken and irregular type faces. The book, however, is a superlative piece of ophthalmic literature and should be on the shelves of every surgical ophthalmologist.

—*Robert E. Murto, M.D.*

[redacted]

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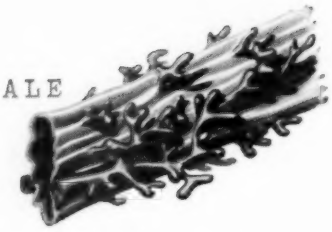
THE FEMALE  URETHRA

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1. Wharton, L. R. in Campbell, M.: Urology, Philadelphia and London, W. B. Saunders Company, 1954, vol. 2, p. 1390 et seq.

2. Barrett, M. E.: J. M. Ass. Alabama 26:144, 1956. 3. Youngblood, V. H.: J. Urol., Balt., 70:926, 1953.

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4. Youngblood, V. H.; Tomlin, E. M.; Williams, J. O. and Kimmelstiel, P.: Tr. Southeast. Sect. Am. Urol. Ass. (to be published).

5. Youngblood, V. H.; Tomlin, E. M.; and Davis, J. B.: J. Urol., Balt., 78:150, 1957.

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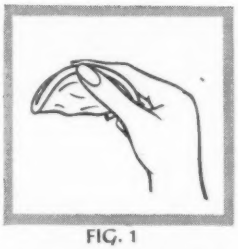


FIG. 1

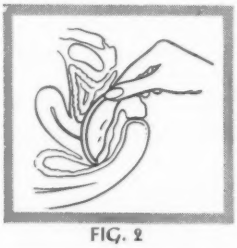
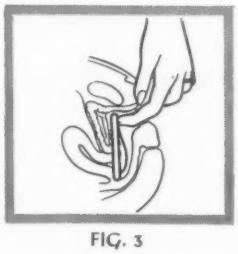


FIG. 2



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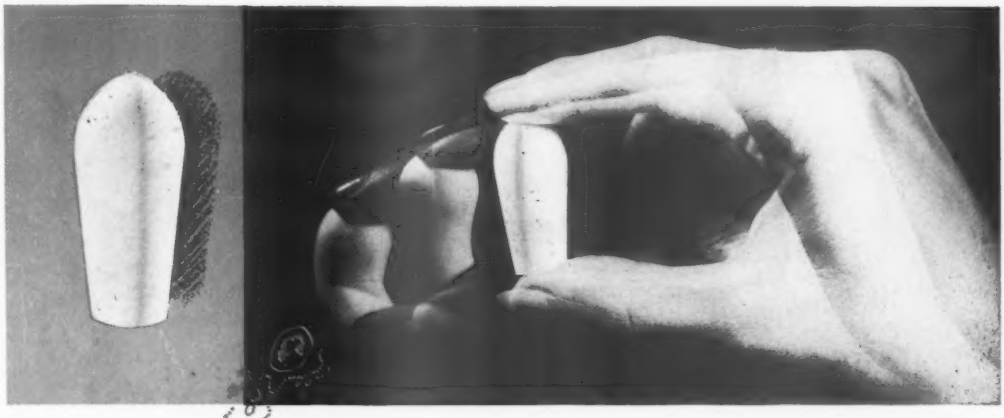

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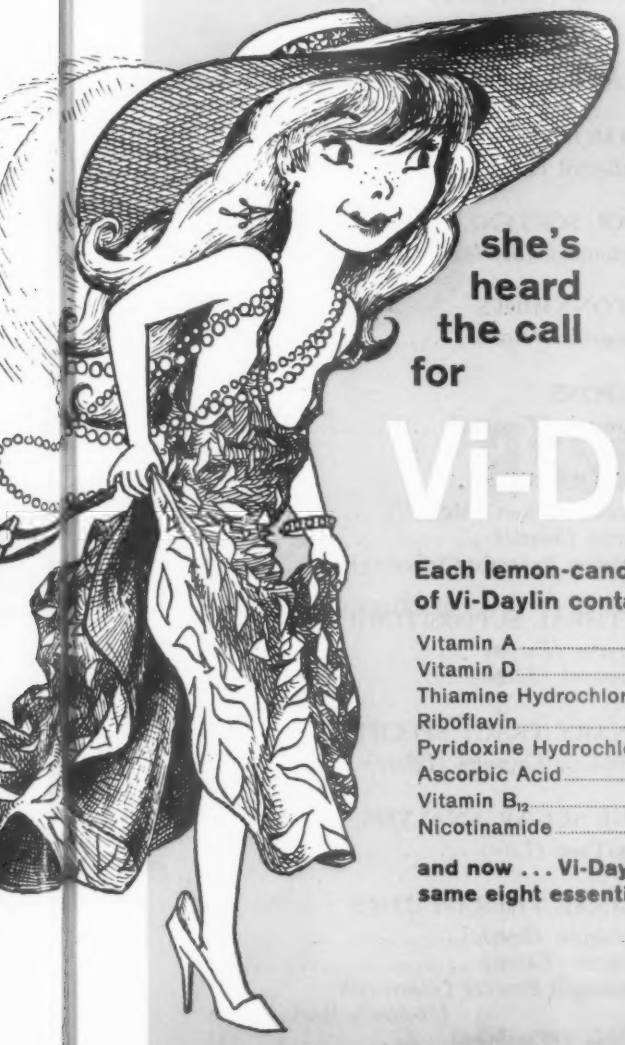

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Massengill Powder solutions are easy to prepare. They are nonstaining, mildly astringent.

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REFERENCES

1. Lang, W.R., Rakoff, A.E., Am. Geriatrics Soc. *1*:520 (1953).
2. Arnot, P.H., The Problem of Douching, Western Journal of Surg., Obs., and Gyn., Vol. 62, No. 2:85 (1954).

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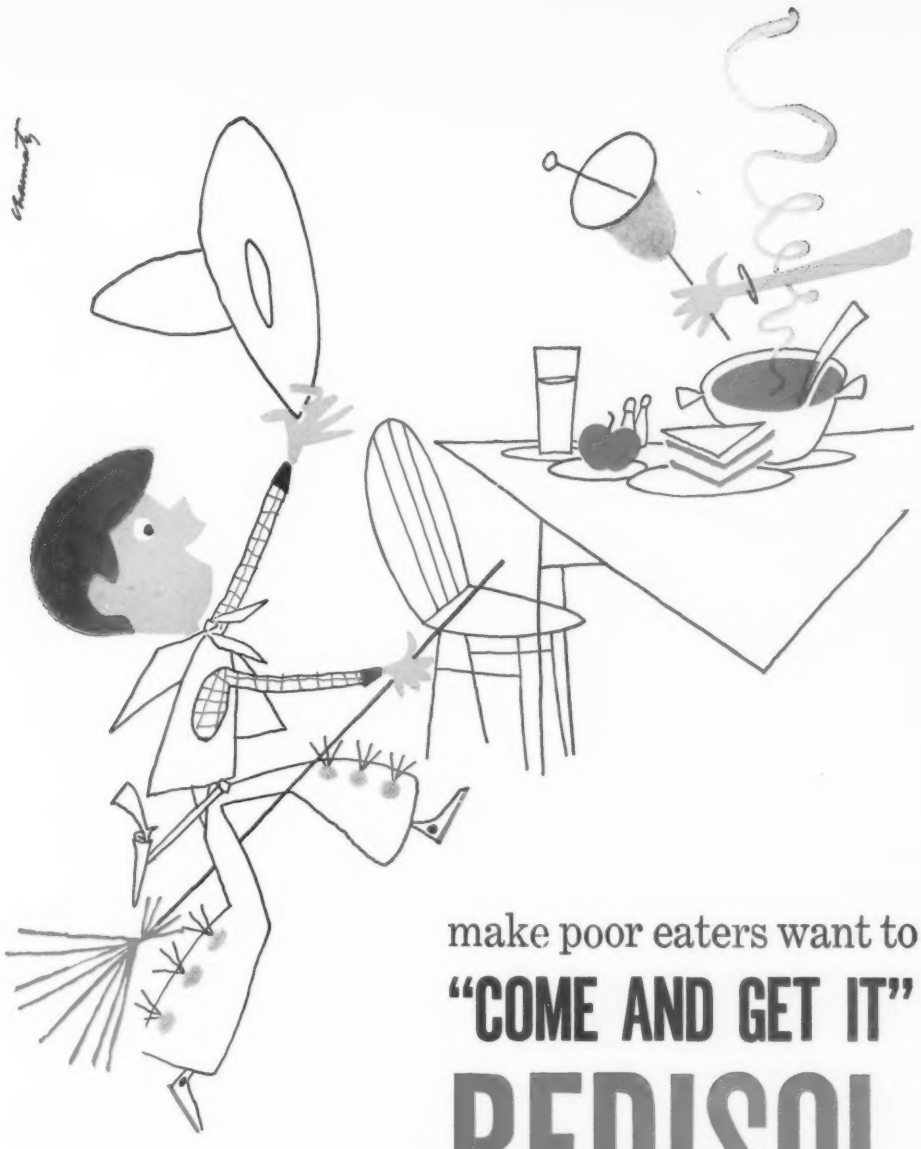

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